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Хорология и флорни елементи

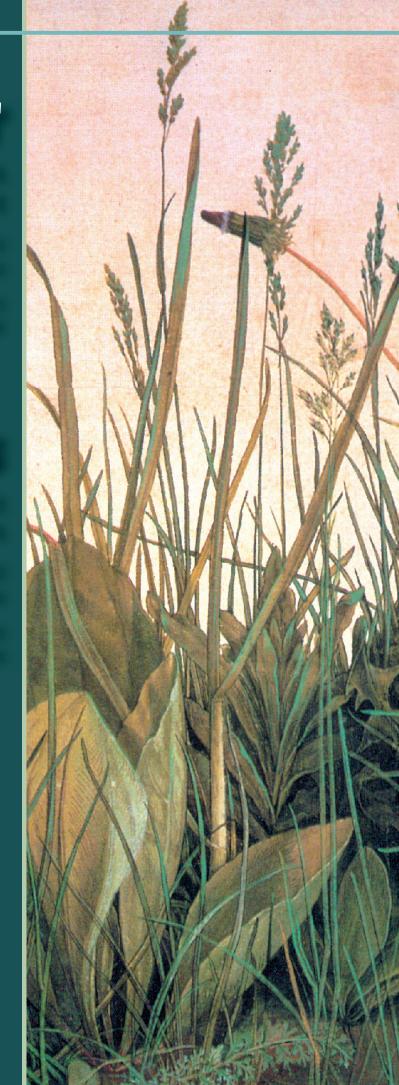
ЧЕТВЪРТО ПРЕРАБОТЕНО И ДОПЪЛНЕНО ИЗДАНИЕ

CONSPECTUS

OF THE BULGARIAN VASCULAR FLORA

Distribution maps and floristic elements

FOURTH REVISED AND UPDATED EDITION



БЪЛГАРСКА ФОНДАЦИЯ БИОРАЗНООБРАЗИЕ

BULGARIAN BIODIVERSITY FOUNDATION



СОФИЯ * SOFIA 2012

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CONSPECTUS OF THE BULGARIAN VASCULAR FLORA

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Fourth revised and enlarged edition

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Хорология и флорни елементи

Четвърто допълнено и преработено издание

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ПРЕДГОВОР КЪМ ЧЕТВЪРТОТО ИЗДАНИЕ

Десет години изминаха от първото издание на Конспекта и повече от пет години от последното му, трето по ред, издание. За този сравнително къс период беше натрупан голям обем данни за българската флора. Имайки предвид, че тиражът на третото издание беше изчерпан, още през 2011 година стана необходима подготовката на ново издание на книгата.

проекти, свързани с инвентаризация на флората, бяха Редица бившия Институт по ботаника (сега Институт осъществени биоразнообразие и екосистемни изследвания) към Българска академия на науките. Сред тях поне няколко трябва да бъдат споменати: "Червена книга на България, т. 1. Растения и гъби", "Важни места за растенията в България", "Биология, екология и контрол на инвазивни чужди видове в българската флора", "Опазване на биоразнообразието в горещи точки на глациални реликтни растения в България", "Пилотна мрежа от малки защитени територии за опазване на растения в България чрез използване на модела на растителните микрорезервати". Заедно с "Флора на Република България" тези проекти включваха интензивна теренна работа и доведоха до голям брой интересни открития и нова информация. През 2011–2012 година българската ботаническа общност даде значителен принос към проекта за картиране на видове и местообитания в мрежата "Натура 2000" в страната. Може да се очаква, че теренната работа по този проект също дава нови флористични данни, които може да се очаква да бъдат публикувани в следващите години. организирани Проучвания, финансирани или дирекциите националните и природните паркове също допринасят за по-доброто познаване на флората на различни части от страната.

Без съмнение, важна роля в нарастващия брой публикации с нови данни играе международното списание Phytologia Balcanica, издавано от Института по биоразнообразие и екосистемни изследвания. От 2006 година то предоставя добра възможност за бързо съобщаване под формата на кратки бележки на нови и интересни национални и регионални находки за Балканите. След създаването на раздела "New Floristic Records in the Balkans" броят на публикуваните нови данни от България нарасна значително. Всички приноси, намерили място в списанието, са достъпни онлайн на адрес http://www.bio.bas.bg/~phytolbalcan/.

Общо 10 вида и хибридни комбинации бяха описани като нови за науката от България, а именно Aethionema rhodopaeum, Bupleurum uechtritzianum, Centaurea diospolitana, Centaurea wagenitziana (C. amplifolia auct. bulg.), Hieracium werneri, Onosma pavlovii (първоначално невалидно публикуван като O. bulgarica), Onosma malkarmayorum, Salix × ardana, Salix × velcevii и Sesleria rhodopaea (Ванснеча & Stoyanov, 2009; Вокšіć & Al., 2011; Каіlis & Eleftheriadou, 2011; Рачьоча, 2007, 2009; Stoyanov, S., 2010а; Szelag, 2006; Тан & Al., 2009; Тан & Реткоча, 2009; Таянеч & Dіміткоч, 2012; Террнек, 2008; Vladімікоч & Szelag, 2006; Zieliński & Al., 2006). В допълнение, сега се включват някои видове, описани преди 2006 година поне частично на основата на български материали и пропуснати в предишното издание –

Juniperus deltoides (J. oxycedrus auct. plur.; Adams, 2004; Adams & Al., 2005), Onosma stojanoffii (Террпек, 1996а, 2008; Turrill, 1925). Биосистематични проучвания потвърдиха видовия статус на Centaurea davidovii (Вапснеvа & Gorgorov, 2010) и сега този вид е добавен в книгата. На основата на наши наблюдения, хербарни данни и някои публикации (Ва́lint & Abadjiev, 2006; Făgăraş & Al., 2010; Greuter, 1997), видът Silene exaltata, описан от България, но посочен с въпросителен знак в предишното издание, сега се счита с потвърдено разпространение в страната.

Впечатляващ брой нови естествено разпространени българската флора бяха добавени в Конспекта – общо 42. Това са Achillea ochroleuca, Allium phthioticum, Anchusa spruneri, Bromus parvispiculatus, Bupleurum euboeum, Carex appropinquata, Celtis tournefortii, Centaurea jankae, Centaurea trinervia, Chenopodium striatiforme, Chenopodium strictum, Cirsium rivulare, Colchicum haynaldii, Colchicum triphyllum, Convolvulus pilosellifolius, Crepis rubra, Dactylorhiza maculata ssp. transsilvanica, Dryopteris × ambroseae, Gagea fragifera, Galium asparagifolium, Galium × pomeranicum, rigidifolium, Juncus hybridus, Linum spathulatum, Minuartia bilykiana, Onosma lypskyi, Onosma rigida, Orobanche laserpitii-sileris, Plantago maritima, Plantago maxima, Plantago sempervirens, Potamogeton obtusifolius, *Potamogeton* berchtoldii, Ranunculus polyanthemoides, Sedum subulatum, Sesleria tenuilolia, Sorbus borbasii, Sorbus mougeotii, Stachys baldaccii, Stachys beckeana, Stipa ucrainica и Taraxacum thracicum (Ammans & Al., 1992; Anchev, 1999; Ančev & Krendl, 2011; Apostolova & al., 2008; Asenov, 2010; Baltisberger, 2006; CHESHMEDZHIEV & MARINOV, 2009; DIMITROV, 2009, 2010a; DIMITROV & TRIFONOV, 2006; FĂGĂRAŞ & AL., 2010; GRAMATIKOV, 1983; GROZEVA, in press; HÁJEK & AL., 2006a; Ivanova, 2006a; Kiryakov & Češmedžiev, 2007; Kolarčik & al., 2010; MITOVA & AL., 2002; NEDELCHEVA & TSONEV, 2006; PEEV & AL., 2009; PERSSON, 1999, 2009; Peruzzi & Al., 2011; Petrova, A.S., 2007; Petrova, A.S. & Venkova, 2008; Petrova, A.S. & Al., 2009a; Scholtz, 2010; Snogerup & Snogerup, 2001; STOYANOV, K., 2009a; STOYANOV, S. & GORANOVA, 2009; STOYANOV, S. & VASSILEV, 2011; Teppner, 1996b, 2008; Tsonev & Karakiev, 2007; Zarrei & Al., 2009; ZIELIŃSKI & AL., 2012). Трябва да се отбележи, че тези нови национални находки идват от различни райони на страната, включително такива, които проучени. обикновено ce считат за добре В допълнение новоустановените видове, разпространението на Dianthus leptopetalus в страната, доскоро под въпрос, сега е потвърдено (FĂGĂRAȘ & AL., 2010; NEGREAN & DENCHEV, 2000), както и това на Salix viminalis (Zieliński & Al., 2012). Освен това, два таксона, известни за България, сега се третират на видово ниво Bupleurum aequiradiatum (преди В. commutatum var. aeguiradiatum) Bupleurum pachnospermum (= В. commutatum И glaucocarpum), по Snogerup & Snogerup (2001) и Stoyanov, S. & Goranova (2009). Asperula suberosa и Delphinium albiflorum са включен в Конспекта като самостоятелни видове, следвайки съответно GORANOVA & ANCHEV (2012) и BANCHEVA (2012). Dianthus noeanus, преди считан за вътревидов таксон на D. petraeus, е отделен с видов ранг, според таксономичното решение на няколко авторитетни източника (виж напр. JALAS & SUOMINEN, 1986; STRID, 1997). Lychnis subintegra сега е приет като отделен вид в съответствие с Greuter

(1997). Молекулярни и морфологични проучвания потвърждават, че Stachys thracica е отделен вид (Аксісек & Al., 2012; Dündar & Al., in press) и поради това е възстановен в българската флора. Голям брой нови видове от родовете Hieracium и Taraxacum са възприети като добри видове в българската флора (Ретрола, A. & Vladimirov, 2010). Това са Hieracium divaricatum, H. heuffelii, H. klisurae, H. neodivergens, H. schultzianum, H. velenovskyi, Taraxacum bulgaricum и Т. dorchocarpum. Няма съмнение, че броят видове от тези два рода в България в бъдеще ще продължи да нараства.

Чуждоземните видове станаха важна тема и интересът към тях нарасна след последното издание на Конспекта. Подробен преглед на проучванията върху разпространението на неместните растения в България последните две десетилетия бе публикуван от РЕТРООГА, А. & AL. (2012). Следните 33 нови вида са намерени в страната и са включени в настоящото издание: Avena byzantina, Bidens bipinnatus, Bidens vulgatus, Catalpa speciosa, incertus, Chenopodium missouriense, Chenopodium pratericola, Chenopodium probstii, Chenopodium pumilio, Conyza sumatrensis, Datura innoxia, Digitaria ciliaris, Eclipta prostrata, Elodea nuttallii, Euphorbia davidii, Fallopia aubertii, Heteranthera rotundifolia, Impatiens balfourii, Koelreuteria paniculata, Lupinus polyphyllus, Modiola caroliniana, Panicum dichotomiflorum, Parthenocissus inserta, Pennisetum setaceum, Phytolacca esculenta, Prunus serotina, Senecio cineraria, Senecio inaequidens, Silphium perfoliatum, Solanum Solanum heterodoxum. Vincetoxicum nigrum, Ziziphus cornutum. (ČEŠMEDŽIEV & SOKOLOV, 2007; ČEŠMEDŽIEV & STOICHEV, 2005; DELIPAVLOV & ČEŠMEDŽIEV, 2003; DIMITROV, 2005; GEORGIEV & AL., 2011; GEORGIEVA & IVANOV, 2007; Greuter & Al., 1984; Grozeva, 2007, 2010a, 2012; Jehlík & Scholz, 2009; Nedelcheva, 2011; Negrean & Denchev, 2000; Petrova, A. & Al., 2012; Petrova, A.S., 2010a, 2011a, 2012; Petrova, A.S. & Vladimirov, 2009, 2012; Tashev, 2007; TSONEV, 2007; VASSILEV & PEDASHENKO, 2009; VELCHEV & PETROVA, A., 2010; VLADIMIROV, 2009a,c; VLADIMIROV & PETROVA, A., 2009; VLADIMIROV & PETROVA, A.S., 2009; ZIELIŃSKI & AL., 2012). Не са посочени находища на Elodea canadensis и Impatiens balfourii и тяхното разпространение предстои да бъде изяснено; картите към тези видове имат въпросителен знак върху цялата територия на страната. Наред с това, се съобщава нова хорологична информация за различни неместни видове, вече известни за България (виж литературни препратки по-долу). Отделни видове от горните (Avena byzantina, Silphium perfoliatum), към момента са посочени само като "случайни" (casual) и бъдещи наблюдения ще покажат поведението им.

Ние смятаме, че включването в Конспекта на непотвърдени и вероятно разпространени в страната видове е от голямо значение, тъй като привлича вниманието на полевите ботаници към растения, които иначе биха могли да останат незабелязани. Няколко такива вида, имащи находища в непосредствена близост до границите на страната или дори понякога споменавани за България, бяха включени в настоящото издание, а именно Allium rumelicum (Özhatay & Al., 2010), Carex magellanica (Dítì & Pukajová, 2003; Schutze-Motel, 1966), Dianthus collinus (Jalas & Suominen, 1986), Dianthus dobrogensis (Jalas & Suominen, 1986; Prodan, 1953), Dianthus strymonis (Strid, 1997), Paronychia rechingeri (Artellari, 1997), Silene orbelica и Silene tenuiflora

(GREUTER, 1997). Повечето от тях са или наскоро отделени или принадлежат към трудни таксономични групи и изглежда възможно дори критична ревизия на българските хербариуми да потвърди някои от тях.

В тази връзка, в изданието са включени два таксона от сем. Orchidaceae, чийто таксономичен ранг е дискусионен, а именно *Epipactis* spiridonovii и Orchis commutata (DELFORGE, 2006).

За част от родовете на *Rosaceae* запазваме традиционното възприемане в българските флористични източници, но безспорната ни препоръка е ботаниците да използват за това и други семейства данните на обобщаващите европейски източници (КURTTO & AL., 2004, 2007, 2010), както и достъпната онлайн Euro+Med Plantbase (http://www.emplantbase.org/home).

Няколко вида и имена са изключени от това издание на книгата по различни причини. Това са Chamomilla suaveolens (име, включено по грешка, бидейки синоним на Matricaria discoidea), Centaurea amplifolia (име, което е било погрешно използвано от български автори и заменено от наскоро обнародваното название С. wagenitziana; TAN & AL., 2009), Colchicum borisii (приеман за синоним на *C. autumnale* след ревизия на типов материал; PERSSON, 1999), Chenopodium acuminatum, Orobanche nana и Orobanche rapumgenistae (изключени след таксономични ревизии; GROZEVA, 2009; STOYANOV, К., 2009); Cynoglossum rotatum (доказано идентичен с С. montanum след ревизия материал; Sutorý, 2008); Galium heldreichii интерпретиран от български автори вместо Galium lovcense; Ančev & Krendl, 2011); Galium scabrifolium (погрешно приеман от български автори вместо G. macedonicum или G. rigidifolium; Ančev & Krendl, 2011); Hieracium zizianum (VLADIMIROV, 2007a); Aristolochia macedonica, Euphorbia velenovskyi и Myosotis macedonica (синоними респективно на A. pallida, E. palustris и M. incrassata; виж Ретроуа, А. & Vladimirov, 2010, и допълнителни литературни препратки в същата работа). Persson (2009) предлага Colchicum diampolis да бъде считан за синоним на Colchicum szovitsii. Въпреки това ние предпочитаме да запазим C. diampolis като самостоятелен вид, до публикуването на по-подробно изследване, което да изясни неговия статус. Наскоро беше съобщено, за голямо съжаление, че двата известни индивида на Quercus thracica ca загинали (Tashev, 2010a). Ние запазваме в Конспекта този най-вероятно хибридогенен таксон, тъй като е известно неговото съществуване в колекции ex situ.

Освен отпадането на таксони, трябва да се отбележат и наскоро направените първите стъпки за реинтродукция на някои изчезнали видове. Така например, Aldrovanda vesiculosa и Nymphaea alba (изчезнали от някои находища) бяха успешно възстановени и се развиват в тяхното предишно находище в Драгоманското блато (Знеполски район). Наскоро е направен опит за реинтродукция и на Caldesia parnassifolia (изчезнала от страната), но бъдещ мониторинг ще покаже дали пренасянето е било успешно.

Хорологията беше актуализирана с данни от многобройни публикации (Аммаnns & al., 1992; Anchev, 2010; Ančev & Goranova, 2009; Ančev & Krendl, 2011; Apostolova–Stoyanova & Stoyanov, 2007; Asenov, 2009a, b, 2010, 2012; Asenov & Pavlova, 2009; Assyov & al., 2007; Baltisberger, 2006; Bancheva & Delcheva, 2006; Bancheva & Gorgorov, 2010; Bancheva & al., 2012;

CHRISTENSEN & AL., 2006; DIMITROV, 2006a, b, 2007, 2010b; DIMITROV & VUTOV, 2006, 2012; Dimitrov & Al., 2006, 2010, 2012; Dimova & Vladimirov, 2006; GORANOVA, 2007; GORANOVA & VASSILEV, 2006; GORANOVA & AL., 2008, 2009, 2010, 2011a, b, 2012 Grozeva, 2004, 2006, 2010b, 2011; Grozeva & Al., 2012; Hájek & Al., 2006a, b, 2007; Ivanova, D., 2006a, b; Ivanova & Al., 2011; Ivanova & Vladimirov, 2007; Karakiev, 2009, 2011, 2012; Kenderova, 2012; Kirjakov, 2008; LANGOUROV & AL., 2012; MARINOV, 2009, 2012; MILANOVA & AL., 2008; Nacheva & Ivanova, 2011; Nedelcheva, 2008, 2011; Nedelcheva & Vasileva, 2009; PAVLOVA, 2010; PAVLOVA & AL., 2006; PEDASHENKO, 2006, 2010; PEDASHENKO & Al., 2009; Persson, 1999; Petrova, A. & Al., 2007; Petrova, A. S., 2006, 2008, 2010b, c, 2011b; Petrova, A. S & Assyov, 2008; Petrova, A. S. & Vasilev, 2006; Petrova, A. S. & Venkova, 2008; Petrova, A. S. & Al., 2007a, b, 2009b, c, 2010, 2011, 2012a, b, c; RAYCHEVA, 2011; RAYCHEVA & DIMITROVA, 2007; RAYCHEVA & Stoyanov, 2012; Ronikier & Ronikier, 2010; Seregin, 2008; Sopotlieva, 2006; STANEV & DELIPAVLOV, 2007; STOYANOV, K., 2009b, c; STOYANOV, S., 2006, 2008, 2010b, 2012a; Stoyanov, S. & Kolev, 2008; Stoyanov, S., & Al., 2006a, b; Tashev, 2008, 2009a, b, 2010a, b, 2011; Tashev & Al., 2010; Tashev & Tsavkov, 2009; Tashev & Vitkova, 2006; Tosheva, 2006; Tosheva & Traykov, 2010; Tosheva & AL., 2009 TRIFONOV, 2009; TSONEV & AL., 2010 VASSILEV, 2007, 2009, 2010, 2011; Vassilev & Pedashenko, 2009, 2010, 2011, 2012; Vassilev & Al., 2007a, b, 2008, 2009, 2012; Velchev & Petrova, A., 2011; Velev & Al., 2010; Vladimirov, 2001, 2006a, b, 2007b, 2009a, b, c, 2011; Vladimirov & Petrova, 2009, 2010a, b; Vladimirov & Szeląg, 2001; Vladimirov & al., 2006; Vutov & Dimitrov, 2002; ZIELIŃSKI & PETROVA, 2012; ŻUKOWSKI, 1993; YANKOVA & CHERNEVA, 2007). беше Разпространението на отделни видове СЪЩО осъвременено информация, включена в новата Червена книга на Република България, в момента под печат, но вече достъпна онлайн (http://e-ecodb.bas.bg/rdb/en/): ANCHEV & GORANOVA (2012), APOSTOLOVA (2012), ASSYOV & DENCHEV (2012), BANCHEVA (2012), DENCHEV & ASSYOV (2012), DIMITROV (2012), DIMITROVA (2012), Genova (2012), Georgiev (2012), Goranova & Anchev (2012), Gussev (2012), IGNATOVA (2012), IVANOVA & TZONEV (2012), PEEV & TSONEVA (2012), PETROVA, A. (2012), Petrova, A. S. (2012), Stoeva (2012), Stoyanov, S. (2012b), Tsonev (2012), VLADIMIROV (2012). Съставителите разбират, че хорологичната информация невинаги може да бъде толкова прецизна, колкото те биха желали. По тази причина трябва да бъдат насърчени критичните прегледи на литературата и хербариумите, с цел да се подобри тук представената информация.

По време на подготовката на Конспекта екипът на "Флора на Република България" подготвяще 11-ти том на основната за българската флора монографска поредица. Този том е под печат и скоро ще бъде на разположение. Той ще включва семействата Asteraceae (подсем. Asteroideae s. str.), Dipsacaceae, Campanulaceae, and Morinaceae. Информацията в него не е включена в настоящия Конспект, като се надяваме читателят да се опира на "Флора на Република България" за посочените семейства.

Направени бяха и някои промени във флористичните елементи. Те са особено видими в групата на балканските ендемити, за които наскоро бе публикуван видов списък (РЕТROVA, А. & VLADIMIROV, 2010). Макар че промените са взети предвид в настоящото издание, за читателя без съмение

ще бъде полезно да се запознае с горецитираната публикация, която съдържа повече информация, отколкото може да се представи във формата на Конспекта, още повече че статията е достъпна онлайн (за интернет адрес виж литературния списък). Dianthus noeanus, Silene exaltata, Stachys baldaccii, Stachys beckeana и Stachys thracica трябва да бъдат добавени към списъка на РЕТROVA, А. & VLADIMIROV (2010), ако се следва приетата тук концепция. В допълнение, ние предпочитаме да приемаме Achillea thracica като български ендемит (NEDELCHEVA, 1998), доколкото съществуват известни съмнения в отнасянето на румънските материали.

Известно е, че се опитваме да бъдем консервативни и да избегнем твърде много промени в имената, което лесно се обяснява с факта, че общата публика на книгата включва не само ботаници, но и студенти, експерти в областта на природозащитата, любители и т.н. Поради това се стремим да запазим книгата съвместима с основните издания за българската флора. Така например, ние все още включваме Psephellus, Colymbada и Cyanus в Centaurea s. 1., макар че скорошните биосистематични проучвания подкрепят тяхното отделяне. Това са основанията и за запазване на традиционно ползваните родови граници и, респективно, видови названия в сем. Orchidaceae. При все това, в някои случаи подобни промени са неизбежни. Така в настоящото издание ние върнахме Aurinia uechtritziana отново в монотипния род Lepidotrichum, след като скорошни молекулярни изследвания дадоха аргументи за това разделяне (Снессні & Selvi, 2009; Сессні, 2011). Aphanes microcarpa се намира сега като A. minutiflora (първото име е било погрешно използвано от българските автори; KURTTO & AL., 2007). Bupleurum odontites замества В. fontanesii (Stoyanov, S. & Goranova, 2009). Celtis plachoniana е коректното име за вида, представен в предходното издание като С. glabrata Steven, което название е по-късен омоним на С. glabrata Sprengel (ZIELIŃSKI & AL., 2012). Така също, видът известен в България като Centaurea atropurpurea (невалидно име) е тук под името Centaurea calocephala. Centaurea finazzeri е приет на видово ниво (BANCHEVA, 2006) и това название замества *C. rupestris*, под което той присъстваше в третото издание на Конспекта. Chenopodium foliosum замества нелегитимното име Chenopodium (Grozeva, 2009). Cynoglossum hungaricum присъства Cynoglossum montanum (Sutorý, 2008). Epipactis gracilis е под името E. exilis (DELFORGE, 2006); Festucopsis sancta ще бъде открит като Peridictyon sanctum (ANGELOV, 2000, 2003; SEBERG & AL., 1991). Linaria rubioides замества погрешно интерпретирания от българските автори Linaria peloponesiaca (Niketić & Томоvić, 2008). Накрая, Opuntia vulgaris е променена на Opuntia humifusa, тъй като предишното име е било наше несполучливо и погрешно използване (относно употребата на тези названия виж също дискусията в LEUENBERGER, 1993).

Понякога ценна флористична информация може да остане скрита в доклади за хромозомни числа (Grozeva, 2010b; Ivanova & Vladimirov, 2007; Ретгоva & Al., 2007; Vladimirov & Szelag, 2001) и микологични публикации (Negrean, 2010; Negrean & Denchev, 2000). Постарали сме се в рамките на нашите възможности да проследим и включим тази информация.

Докато се подготвяше новото издание на книгата, възникна въпросът дали то трябва да включва предговорите на предходните издания. Прецени се, че тези предговори са всъщност едни кратки и полезни ретроспективи на проучванията върху разнообразието и разпространението на българските висши растения през последното десетилетие. Те съдържат също основна информация за някои принципи, които следваме в книгата. Поради това бе решено, че е добре те да бъдат достъпни за читателите, които може да не разполагат с предходните издания.

Накрая, съставителите ще оценят всички критични коментари и предложения за подобряване на включената информация. Те също така ще приветстват получаването на публикации, които засягат материали ИЛИ таксони, разпространени В България. Адресите кореспонденция могат да бъдат открити в края на книгата.

Благодарности

Подготовката и актуализирането на всеки един видов списък е задача, която изисква време и много усилия. Това ново издание едва ли щеше да бъде възможно без постоянната подкрепа на много колеги и приятели. На първо място бихме искали да изразим нашата признателност на д-р Ана за насърчаването, за огромната помощ, ценни предоставена информация. Не можем да пропуснем също нашия колега Владимир Владимиров, комуто благодарим за готовността да предостави експертен съвет по трудни въпроси и за приятните и полезни обсъждания. Благодарим на д-р Петър Желев за любезно предоставените критични бележки. Както обикновено, бихме желали да благодарим на нашите колеги, с които се наслаждавахме на многобройни и ползотворни теренни пътувания. Удоволствие е за нас да отправим благодарност към кураторите на българските хербариуми, за тяхната помощ при проучванията ни върху флората на страната. Благодарност дължим на институциите, в които работим, за това че направиха възможно продължението на този труд. Накрая, но не по значение, публикуването на това издание на Конспекта не би било възможно без финансовата помощ, предоставена от Националния фонд "Научни изследвания" с договор ДНИС 01/05/11.12.2011. Тази финансова подкрепа позволи безплатното разпространението на електронна версия на книгата, която ще бъде достъпна за четене и изтегляне в Google Books (http://books.google.com/), Archive.org (http://archive.org/), Academia. edu (http://www.academia.edu/) и Scribd (http://www.scribd.com/).

FOREWORD TO THE FOURTH EDITION

Ten years have passed since the first edition of the Conspectus and more than five after its last edition. This is relatively short period, but a large amount of data on the Bulgarian flora was accumulated meanwhile. Given that the third edition is now out-of-print, yet in 2011 the preparation of a new edition of the book seemed necessary.

A number of inventory projects were run since 2006 by the former Institute of Botany (currently Institute of Biodiversity and Ecosystem Research of the Bulgarian Academy of Sciences). Among these at least a few could be mentioned, namely "Red data book of Republic of Bulgaria, vol. 1. Plants and Fungi", "Important plant areas in Bulgaria", "Biology, ecology and control of the invasive alien species in the Bulgarian flora", "Conservation of biodiversity in hot-spots of glacial relict plants in Bulgaria", "A pilot network of small protected sites for plant species in Bulgaria using the plant micro-reserve model". Together with "Flora of Republic of Bulgaria" these projects have included intensive field work, resulting in a number of interesting discoveries and new information. During 2011-2012 the Bulgarian botanical community provided extensive support for project on mapping species and habitats in the Natura 2000 network in the country. It could be expected that the field work on this project is also bringing new floristic data, which will be hopefully published in the years to follow. Surveys financed or run by the directorates of national and nature parks certainly contribute to the better knowledge on the flora of various parts of the country.

There could be little doubt, that an important role in the increasing amount of publications with new findings plays the international journal Phytologia Balcanica, published by the Institute of Biodiversity and Ecosystem Research. Since 2006 it provides a convenient platform for rapid publication in the form of brief notes on new and interesting national and regional records in the Balkans. After the launch of the New Records section, the number of published new data from Bulgaria has visibly increased. All contributions, which appeared in the journal, are available online at http://www.bio.bas.bg/~phytolbalcan/.

A total of 10 species and hybrid combinations were described as new for the science from Bulgaria, namely Aethionema rhodopaeum, uechtritzianum, Centaurea diospolitana, Centaurea wagenitziana (C. amplifolia auct. bulg.), Hieracium werneri, Onosma pavlovii (first invalidly published as O. bulgarica), Onosma malkarmayorum, Salix × ardana, Salix × velcevii, and Sesleria rhodopaea (Bancheva & Stoyanov, 2009; Boršić & al., 2011; Kailis & ELEFTHERIADOU, 2011; PAVLOVA, 2007, 2009; STOYANOV, S., 2010a; SZELAG, 2006; TAN & AL., 2009; TAN & PETROVA, 2009; TASHEV & DIMITROV, 2012; TEPPNER, 2008; VLADIMIROV & SZELAG, 2006; ZIELIŃSKI & AL., 2006). In addition, some species, described at least partly on Bulgarian material prior to 2006 and omitted in the previous edition, are now included - Juniperus deltoides (J. oxycedrus auct. plur.; Adams, 2004; Adams & Al., 2005), Onosma stojanoffii (Teppner, 1996a, 2008; TURRILL, 1925). Biosystematic studies confirmed the species status of Centaurea davidovii (BANCHEVA & GORGOROV, 2010) and this species is now listed in the

book. Based on our own observations, data from herbaria, and some publications (BÁLINT & ABADJIEV, 2006; FĂGĂRAŞ & AL., 2010; GREUTER, 1997), Silene exaltata, described from Bulgaria, but found under question in the previous edition, is now to be considered with confirmed distribution in the country.

An impressive number of new native species of the Bulgarian flora was added to the Conspectus - totally 42. These are Achillea ochroleuca, Allium phthioticum, Bromus parvispiculatus, Bupleurum euboeum, Anchusa spruneri, Celtis tournefortii, Centaurea jankae, appropinguata, Centaurea trinervia, Chenopodium striatiforme, Chenopodium strictum, Cirsium rivulare, Colchicum Convolvulus pilosellifolius, haynaldii, Colchicum triphyllum, Dactylorhiza maculata ssp. transsilvanica, Dryopteris × ambroseae, fragifera, Galium asparagifolium, Galium × pomeranicum, Galium rigidifolium, Juncus hybridus, Linum spathulatum, Minuartia bilykiana, Onosma lypskyi, Onosma rigida, Orobanche laserpitii-sileris, Plantago maritima, Plantago maxima, sempervirens, Potamogeton obtusifolius, Potamogeton Ranunculus polyanthemoides, Sedum subulatum, Sesleria tenuilolia, Sorbus borbasii, Sorbus mougeotii, Stachys baldaccii, Stachys beckeana, Stipa ucrainica, and Taraxacum thracicum (Ammans & Al., 1992; Anchev, 1999; Ančev & Krendl, 2011; Apostolova & Al., 2008; Asenov, 2010; Baltisberger, 2006; Cheshmedzhiev & Marinov, 2009; Dimitrov, 2009, 2010a; Dimitrov & Trifonov, 2006; Făgăraș & AL., 2010; GRAMATIKOV, 1983; GROZEVA, in press; HÁJEK & AL., 2006a; IVANOVA, 2006a; Kiryakov & Češmedžiev, 2007; Kolarčik & al., 2010; Mitova & al., 2002; Nedelcheva & Tsonev, 2006; Peev & al., 2009; Persson, 1999, 2009; Peruzzi & AL., 2011; Petrova, A.S., 2007; Petrova, A.S. & Venkova, 2008; Petrova, A.S. & AL., 2009a; SCHOLTZ, 2010; SNOGERUP & SNOGERUP, 2001; STOYANOV, K., 2009a; STOYANOV, S. & GORANOVA, 2009; STOYANOV, S. & VASSILEV, 2011; TEPPNER, 1996b, 2008; TSONEV & KARAKIEV, 2007; ZARREI & AL., 2009; ZIELIŃSKI & AL., 2012). It is notable that those new national records come from different regions of the country, including such that are normally considered well-studied. Apart from the newly recorded species, the so far questionable distribution of Dianthus leptopetalus in the country is now confirmed (FĂGĂRAȘ & AL., 2010; NEGREAN & DENCHEV, 2000), as well as the occurrence of Salix viminalis (Zieliński & Al., 2012). Further more, two taxa, known to be present in Bulgaria, are considered now at species level - Bupleurum aequiradiatum (formerly B. commutatum var. aequiradiatum) and Bupleurum pachnospermum (= B. commutatum ssp. glaucocarpum) after SNOGERUP & SNOGERUP (2001) and STOYANOV, S. & GORANOVA (2009). Asperula suberosa and Delphinium albiflorum appear in the Conspectus as self-standing species, following respectively GORANOVA & ANCHEV (2012) and BANCHEVA (2012). Dianthus noeanus, formerly treated as infraspecific taxon of D. petraeus, is separated following the taxonomic decision of several authoritative sources (see e. g. Jalas & Suominen, 1986; Strid, 1997). Lychnis subintegra is now accepted as a separate species in accordance with GREUTER (1997). Molecular and morphological research also suggests that Stachys thracica is a self-standing species (AKÇIÇEK & AL., 2012; DÜNDAR & AL., in press) and it is therefore reinstated in the Bulgarian flora. A number of new hieracia and taraxaca are recognized as good species in the Bulgarian flora (PETROVA, A. & VLADIMIROV, 2010). These are Hieracium divaricatum, H. heuffelii, H. klisurae, H. neodivergens, H. schultzianum, H. velenovskyi, Taraxacum bulgaricum, and T. dorchocarpum. There could be little doubt the number of species in those two genera in Bulgaria will continue to grow in future.

Alien species have become a major issue and the interest in this topic has even increased since the last edition of the Conspectus. A detailed overview of the studies on the distribution of alien plants in Bulgaria during the last two decades was recently published by Petrova, A. & Al. (2012). The following 33 new species have been found in the country and are included in this edition: Avena byzantina, Bidens bipinnatus, Bidens vulgatus, Catalpa speciosa, Cenchrus incertus, Chenopodium missouriense, Chenopodium pratericola, Chenopodium probstii, Chenopodium pumilio, Conyza sumatrensis, Datura innoxia, Digitaria ciliaris, Eclipta prostrata, Elodea nuttallii, Euphorbia davidii, Fallopia Heteranthera rotundifolia, Impatiens balfourii, Koelreuteria paniculata, Lupinus polyphyllus, Modiola caroliniana, Panicum dichotomiflorum, Parthenocissus inserta, Pennisetum setaceum, Phytolacca esculenta, Prunus serotina, Senecio cineraria, inaequidens, Silphium perfoliatum, Solanum Senecio cornutum, Solanum heterodoxum, Vincetoxicum nigrum, Ziziphus jujuba (Češmedžiev & Sokolov, 2007; ČEŠMEDŽIEV & STOICHEV, 2005; DELIPAVLOV & ČEŠMEDŽIEV, 2003; DIMITROV, 2005; Georgiev & Al., 2011; Georgieva & Ivanov, 2007; Greuter & Al., 1984; Grozeva, 2007, 2010a, 2012; Jehlík & Scholz, 2009; Nedelcheva, 2011; Negrean & DENCHEV, 2000; PETROVA, A. & AL., 2012; PETROVA, A.S., 2010a, 2011a, 2012; Petrova, A.S. & Vladimirov, 2009, 2012; Tashev, 2007; Tsonev, 2007; Vassilev & Pedashenko, 2009; Velchev & Petrova, A., 2010; Vladimirov, 2009a,c; Vladimirov & Petrova, A., 2009; Vladimirov & Petrova, A.S., 2009; Zieliński & Al., 2012). No detailed localities have been reported for Elodea canadensis and Impatiens balfourii and their distribution is yet to be clarified; the maps for those two species bear a question mark all over the territory of the country. Additionally, new chorological information appeared for different non-native species, already known to be present in Bulgaria (for references see below). Some of the above species (Avena byzantina, Silphium perfoliatum), are so far found only as casuals and future research will have to clarify their behavior.

We tend to consider that the inclusion of unconfirmed and possibly present species in the Conspectus is a matter of great importance as it turns the attention of the field botanists to plants, which may otherwise go unnoticed. Several such species, having localities very close to the country's borders or even sometimes mentioned for Bulgaria, were included in the present edition, namely Allium rumelicum (ÖZHATAY & AL., 2010), Carex magellanica (Dítì & PUKAJOVÁ, 2003; SCHUTZE-MOTEL, 1966), Dianthus collinus (JALAS & SUOMINEN, 1986), Dianthus dobrogensis (JALAS & SUOMINEN, 1986; PRODAN, 1953), Dianthus strymonis (STRID, 1997), Paronychia rechingeri (ARTELLARI, 1997), Silene orbelica, and Silene tenuiflora (GREUTER, 1997). Most of these are either recently separated, or belong to difficult taxonomic groups and it seems possible that even a critical survey of the Bulgarian herbaria might confirm some of them.

In this relation, the Conspectus includes two taxa of the family *Orchidaceae*, which taxonomic status is yet to be clarified, namely *Epipactis spiridonovii* and *Orchis commutata* (Delforge, 2006).

For part of the genera of *Rosaceae* we keep the traditional treatment used in Bulgarian floristic sources, but for this and other families the reader is advised to consult also some more general European sources (KURTTO & AL., 2004, 2007, 2010), as well as the available online database Euro+Med Plantbase (http://www.emplantbase.org/home).

Several species and names have disappeared in this edition of the book for various reasons. These are Chamomilla suaveolens (included by an error and being a synonym of Matricaria discoidea), Centaurea amplifolia (a name having been misapplied by Bulgarian authors and replaced by the newly described C. wagenitziana; TAN & AL., 2009), Colchicum borisii (synonymized to C. autumnale after revision of the type; PERSSON, 1999), Chenopodium acuminatum, Orobanche nana, and Orobanche rapum-genistae (both excluded after taxonomic revisions; GROZEVA, 2009; STOYANOV, K., 2009); Cynoglossum rotatum (proven to be identical with C. montanum after revision of the type; SUTORÝ, 2008); Galium heldreichii (misinterpreted by Bulgarian authors instead of Galium lovcense; ANČEV & KRENDL, 2011); Galium scabrifolium (misinterpreted by Bulgarian authors instead of G. macedonicum or G. rigidifolium; ANČEV & KRENDL, 2011); Hieracium zizianum (VLADIMIROV, 2007a); Aristolochia macedonica, Euphorbia velenovskyi and Myosotis macedonica (being synonyms of A. pallida, E. palustris and M. incrassata, respectively; see Petrova, A. & Vladimirov, 2010, and references therein). Persson (2009) suggested that Colchicum diampolis should be perceived as a synonym of Colchicum szovitsii. However, we prefer to keep C. diampolis as a self-standing species until more detailed study is published, which will clarify its status. It is rather sad that very recently the two known individual of Quercus thracica were reported to have died out (Tashev, 2010a). We preserve this apparently hybridogenous taxon in the Conspectus as it is known that it survives in ex situ collections.

It must be noted that apart from the disappearing records, very recently the first steps were taken for the re-introduction of some extinct species. Thus, Aldrovanda vesiculosa and Nymphaea alba (locally extinct) were successfully restored and now grow again in their former locality in Dragoman marsh (Znepole region). An attempt was made recently for the re-introduction of Caldesia parnassifolia (nationally extinct), but monitoring will have to show whether the transfer was successful.

The chorology was updated with the data from numerous publication (Ammanns & Al., 1992; Anchev, 2010; Ančev & Goranova, 2009; Ančev & Krendl, 2011; Apostolova-Stoyanova & Stoyanov, 2007; Asenov, 2009a, b, 2010, 2012; Asenov & Pavlova, 2009; Assyov & Al., 2007; Baltisberger, 2006; Bancheva & Delcheva, 2006; Bancheva & Gorgorov, 2010; Bancheva & Al., 2012; Christensen & Al., 2006; Dimitrov, 2006a, b, 2007, 2010b; Dimitrov & Vutov, 2006, 2012; Dimitrov & Al., 2006, 2010, 2012; Dimova & Vladimirov, 2006; Goranova, 2007; Goranova & Vassilev, 2006; Goranova & Al., 2008, 2009, 2010, 2011a, b, 2012 Grozeva,

2004, 2006, 2010b, 2011; Grozeva & Al., 2012; Hájek & Al., 2006a, b, 2007; IVANOVA, D., 2006a, b; IVANOVA & AL., 2011; IVANOVA & VLADIMIROV, 2007; KARAKIEV, 2009, 2011, 2012; Kenderova, 2012; Kirjakov, 2008; Langourov & Al., 2012; MARINOV, 2009, 2012; MILANOVA & AL., 2008; NACHEVA & IVANOVA, Nedelcheva, 2008, 2011; Nedelcheva & Vasileva, 2009; Pavlova, 2010; Pavlova & AL., 2006; Pedashenko, 2006, 2010; Pedashenko & Al., 2009; Persson, 1999; Petrova, A. & Al., 2007; Petrova, A. S., 2006, 2008, 2010b, c, 2011b; Petrova, A. S & Assyov, 2008; Petrova, A. S. & Vasilev, 2006; Petrova, A. S. & Venkova, 2008; Petrova, A. S. & Al., 2007a, b, 2009b, c, 2010, 2011, 2012a, b, c; RAYCHEVA, 2011; RAYCHEVA & DIMITROVA, 2007; RAYCHEVA & STOYANOV, 2012; Ronikier & Ronikier, 2010; Seregin, 2008; Sopotlieva, 2006; Stanev & DELIPAVLOV, 2007; STOYANOV, K., 2009b, c; STOYANOV, S., 2006, 2008, 2010b, 2012a; Stoyanov, S. & Kolev, 2008; Stoyanov, S., & Al., 2006a, b; Tashev, 2008, 2009a, b, 2010a, b, 2011; Tashev & Al., 2010; Tashev & Tsavkov, 2009; Tashev & VITKOVA, 2006; TOSHEVA, 2006; TOSHEVA & TRAYKOV, 2010; TOSHEVA & AL., 2009 Trifonov, 2009; Tsonev & Al., 2010 Vassilev, 2007, 2009, 2010, 2011; Vassilev & Pedashenko, 2009, 2010, 2011, 2012; Vassilev & Al., 2007a, b, 2008, 2009, 2012; Velchev & Petrova, A., 2011; Velev & Al., 2010; Vladimirov, 2001, 2006a, b, 2007b, 2009a, b, c, 2011; Vladimirov & Petrova, 2009, 2010a, b; Vladimirov & Szelag, 2001; Vladimirov & al., 2006; Vutov & Dimitrov, 2002; Zieliński & PETROVA, 2012; ŻUKOWSKI, 1993; YANKOVA & CHERNEVA, 2007). The distribution of individual species has also been updated with the information, included in the new Red Data Book of Republic of Bulgaria, which is currently in press, but is already available online (http://e-ecodb.bas.bg/rdb/en/): ANCHEV & GORANOVA (2012), Apostolova (2012), Assyov & Denchev (2012), Bancheva (2012), Denchev & Assyov (2012), Dimitrov (2012), Dimitrova (2012), Genova (2012), Georgiev (2012), GORANOVA & ANCHEV (2012), GUSSEV (2012), IGNATOVA (2012), IVANOVA & TZONEV (2012), PEEV & TSONEVA (2012), PETROVA, A. (2012), PETROVA, A. S. (2012), STOEVA (2012), STOYANOV, S. (2012b), TSONEV (2012), VLADIMIROV (2012). The compilers are fully aware that the chorological information may not always be as precise as they would hope to. It is therefore that critical surveys of the literature and herbaria on individual species are to be encouraged, for that helps to improve the data presented here.

During the preparation of the Conspectus the team of the Flora of Republic of Bulgaria has been preparing the 11th volume of the monographic series, basic for the Bulgarian flora. The volume is now in press and will be available soon and will include the families *Asteraceae* (subfamily *Asteroideae* s. str.), *Dipsacaceae*, *Campanulaceae*, and *Morinaceae*. This information is not incorporated in the Conspectus and it is hoped that the reader will refer to the Flora of Republic of Bulgaria for those families.

Several changes appear in the floristic elements. They are especially well-visible in the group of the Balkan endemics, where a list of species was recently published (Petrova, A. & Vladimirov, 2010). Although the changes are taken into account in the current edition, the reader will certainly find useful to refer also to the above publication, which contains more information than possible to fit in the format of the Conspectus, moreover that the paper is conveniently available

online (for web-address see the entry in the list of references). Dianthus noeanus, Silene exaltata, Stachys baldaccii, Stachys beckeana, and Stachys thracica must be added to the list of Petrova, A. & Vladimirov (2010) if the concept accepted here is followed. In addition, we prefer to treat Achillea thracica as a Bulgarian endemic (Nedelcheva, 1998), as far as there are some doubts about the identity of the Romanian materials.

It is known that we tend to be conservative and avoid too many name changes, which is easily explained by that fact that the general public of the book includes not only botanists, but also students, experts in nature conservation, hobbyists, etc. We therefore try to keep the book compatible with the basic editions on the Bulgarian flora. As for example we still lump Psephellus, Colymbada and Cyanus into Centaurea s. l., although recent biosystematic research has provided support for their separation. For the same reason we keep the traditional generic boundaries and species names respectively in the Orchidaceae family. Nevertheless, in some cases such changes are unavoidable. Thus in the current edition we have moved Aurinia uechtritziana back to the monotypic genus Lepidotrichum, being urged to do this as recent molecular studies provided support for this separation (CHECCHI & SELVI, 2009; CECCHI, 2011). Aphanes microcarpa is now found as A. minutiflora (the first name being misapplied by Bulgarian authors; Kurtto & Al., 2007). Bupleurum odontites replaces B. fontanesii (Stoyanov, S. & Goranova, 2009). Celtis plachoniana appears to be the correct name for the species, named in the previous edition as C. glabrata Steven, which is a later homonym of C. glabrata Sprengel (ZIELIŃSKI & AL., 2012). Also, the species previously known in Bulgaria as Centaurea atropurpurea (invalid name) is here under the name Centaurea calocephala. Centaurea finazzeri is accepted at species level (BANCHEVA, 2006) and this name replaces C. rupestris under which it appears in the third edition of the Conspectus. Chenopodium foliosum replaces the illegitimate name Chenopodium virgatum (GROZEVA, 2009). Cynoglossum hungaricum appears as Cynoglossum montanum (Sutorý, 2008). Epipactis gracilis is now E. exilis (Delforge, 2006); Festucopsis sancta will be found as Peridictyon sanctum (ANGELOV, 2000, 2003; SEBERG & Al., 1991). Linaria rubioides replaces the misinterpreted by Bulgarian authors Linaria peloponesiaca (Niketić & Tomović, 2008). Finally, Opuntia vulgaris is changed to Opuntia humifusa, the former name being our own unfortunate misapplication (see also discussion in Leuenberger, 1993).

Sometimes valuable floristic information may remain hidden in chromosome number reports (Grozeva, 2010b; Ivanova & Vladimirov, 2007; Petrova & Al., 2007; Vladimirov & Szelag, 2001) and mycological publications (Negrean, 2010; Negrean & Denchev, 2000). We have tried to the best of our knowledge to trace and include this information.

When preparing the new edition of the book, a question was raised if it should include the prefaces to the earlier editions. It was considered though, that they are in fact a brief and useful retrospective account on the studies on the diversity and the chorology of the Bulgarian flora over the last decade. They also contain some essential information for some principles that we follow in the book. It was

therefore decided that they are better available to the readers, who may not have the previous editions in hand.

Finally, the compilers will highly appreciate any critical comments and suggestions for improvement of the information included. They will also welcome receiving publications that tackle Bulgarian material or taxa, distributed in Bulgaria. The addresses for correspondence might be found at the end of the book.

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The preparation and the updating of any checklist is a time consuming task, which also requires a lot of effort. Thus, the new edition would have hardly been possible without the continuing support by many colleagues and friends. At the very first place we would like to express our gratitude to Ana Petrova, PhD, for the encouragement, for the immense support, valuable advice, and information provided. We could not pass also our colleague Vladimir Vladimirov, who is thanked for his readiness to provide expert advice on tricky matters and for the enjoyable and useful discussions. Petar Zhelev, PhD, is thanked for the kindly provided critical comments. As always, we would like to thank to our colleagues, with whom we enjoyed numerous productive field trips. It is our pleasure to extend our gratitude to the curators of the Bulgarian herbaria for the help kindly provided during our research on the flora of the country. Thanks are due to the institutions where we work for making it possible to sustain this work. Last but not least, the publishing of this edition of the Conspectus would have been impossible without the financial aid provided by the Bulgarian Science Fund through contract DNIS 01/05/11.12.2011. This financial support allowed distributing the electronic version of the book free of charge and it will be available for reading and download on Google Books (http://books.google.com/), Archive.org (http://archive.org/), Academia.edu (http://www.academia.edu/), and Scribd (http://www.scribd.com/).

ПРЕДГОВОР КЪМ ТРЕТОТО ИЗДАНИЕ

Видовото богатство на дадена територия е динамична величина поради навлизането на нови видове и изчезването на някои от съществуващите. Списъците на видове за дадена територия (флори, конспекти) се променят поради промените във видовото богатство, но и в резултат на нови таксономични виждания и концепции. Поради тези съображения, когато в началото на 2006 г. стана ясно, че тиражът на второто издание от 2002 г. е почти изчерпан, решението естествено бе да подготвим ново издание.

Краткият период, изминал от отпечатването на второто издание, е период на интензивни проучвания на българската флора. Приключени са или са в ход редица проекти. Част от тях са свързани с интензивна теренна работа, покриваща цялата територия на страната. В Института по ботаника Българска академия на науките ca базирани проектите: "Биоразнообразие на флората и растителността на Родопите" (2001–2003), "Проучване на тревните съобщества в България" (2002-2004), "Оценка на потенциалните важни места за растенията в България" (2003–2005), "Червени списъци на растения и гъби" (2003–2005), "Червена книга на България. Том 1. Растения и гъби" (2004–2007), "Оценка на чуждите за българската флора и микота видове" (2005–2007). Проучванията, свързани с изработване на планове за управление на защитени територии, в т. ч. на големи такива, като националните и природни паркове (Централен Балкан, Рила, Пирин, Витоша, Странджа, Сините камъни, Рилски манастир, Русенски Лом), както и на редица резервати, обогатиха хорологичната информация за редица видове. Принос в това отношение дадоха и проектите по изграждане на мрежата NATURA 2000 в България.

Изключително важен принос за изясняване на състава на българската флора имат биосистематичните проучвания, сред които през последните години се открояват тези на папратовидните растения, както и семействата Asteraceae (Achillea, Centaurea, Hieracium, Crepis), Brassicaceae, Campanulaceae, Fabaceae при висшите растения.

В пряка връзка с интензивността на проучванията, изминалият период е богат на публикации върху българската флора. Обстоен обзор на проучванията и публикациите за периода 1993–2004 г. дават РЕТКОVA, А. & AL. (2005). През 2003 г. излезе от печат и Определител на растенията в България (DELIPAVLOV & CHESHMEDZHIEV, 2003), в който са включени 3800 диворастящи и 530 интродуцирани и култивирани вида.

В настоящето, трето издание на Конспекта са включени общо 3996 вида висши растения, което е с 146 вида повече от броя в предходното. Съществено различие е включването на видове, чието присъствие в българската флора е непотвърдено, но вероятно. При повечето от тях (26 вида) основание за включването им в настоящия Конспект е посочването им под въпрос в Определителя на висшите растения (Коzнинакоv, 1992). Включването на останалите видове е въз основа на различни трудове и

публикации (Ančev, 2001; Erben, 2002; Fröhner, 1997 и т.н.). В случаите, когато има предположения за срещането на вида в конкретен район, е поставен въпросителен знак ("?") върху района (районите). Когато се допуска срещането на вида в България, но без конкретен район, въпросителният знак е поставен върху картата на цялата страна.

Описани като нови за науката видове от страната през този период са Alyssum orbelicum Ančev & Uzunov (Ančev & Uzunov, 2002), Bolboschoenus platycarpus Marhold, Hroudová, Ducháčec & Zákravský (Marhold & Al., 2004), Festuca achtarovii Velčev & Vassilev, F. calcarea Velčev ex Denchev, F. maleschevica Velčev & Vassilev, F. staroplaninica Velčev, F. vandovii Velčev ex Denchev, (Denchev, 2004; Velčev, 2002; Velčev & Vassilev 2002a), Hieracium kittaniae Vladimir., H. petrovae Vladimir. & Szelag (Vladimirov, 2003; Vladimirov & Szelag, 2006), Vicia jordanovii Velčev (Velčev, 2002).

Добавени са също така редица видове, описани от България преди 2002 г., но останали неотразени в предходното издание. Такива са: Alchemilla sirjaevii Plochek (PLOCHEK, 1983), Bromus orbelicus (Velen.) Petrova, Kožucharov & Ehrend. (Petrova, A. & al., 1997), Bromus parilicus Petrova, Kožucharov & Ehrend. (Petrova, A. & Al., 1997), Carex riloensis Stoeva & Popova (Stoeva & 1994), POPOVA, Myosotis margaritae Štěpánková (ŠTĚPÁNKOVÁ, Впечатляващ е броят на включените за пръв път в Конспекта видове от род Taraxacum - общо 43. Сред тях са 20 вида, описани за пръв път от България (Doll, 1978; Kirschner & Štěpánek 1993, 1998). С оглед на настъпилите промени в таксономичната концепция на този род, статусът на част от тези видове (Doll, 1978) може да бъде обект на бъдеща критична преоценка.

Нови за страната видове и такива неотразени в предишното издание на Конспекта са Achillea asplenifolia Vent., Arabis ciliata Clairv., Bulpeurum ranunculoides L., Carex caespitosa L., C. elata All., C. hartmanii Cajander, C. lasiocarpa Ehrh., Cerastium tenoreanum Ser., Clypeola microcarpa Moris, Crocus pallidus Kitanov & Drenkovsky, Dryopteris affinis (Lowe) Fraser-Jenk., Epipactis gracilis B.& H. Baumann, E. greuteri H. Baumann & Künkele, E. leptochila (Godgery) Godfery, E. pontica Taubenheim, Equisetum × moorei Newman, Geranium aristatum Freyn. & Sint., Gymnadenia densiflora (Wahlenb.) A. Dietr., Lathyrus filiformis (Lam.) Gay, Leontodon saxatilis Lam., L. tuberosus L., Linaria angustissima (Loisel) Borbás, Luzula divulgata Kirshner, L. falax Kirschner, Myosotis michaelae Štěpánková, Ophrys reinholdii Spruner ex Fleishm., Polycarpon diphyllum Cav., Polypodium interjectum Shivas, P. × mantoniae Rothm., Quercus trojana Webb., Rumex confertus Willd., Sagittaria latifolia Willd., Sesleria argentea (Savi) Savi, S. autumnalis (Scop.) F.W. Schultz, S. robusta Schott, Nym. & Kotschi, S. filifolia Hoppe, S. uliginosa Opiz, Thesium procumbens C.A. Mey, Thlaspi viridisepalum (Podp.) Greuter & Burdet., Thymelaea gussonei Boreau, Tragopogon floccosus Waldst. & Kit., Vulpia fasciculata (Forssk.) Samp. (Ančev, 2001; Bergman & Al., 2004; Delipavlov, 2000; Delipavlov & Češmedžiev, 2003; Dimitrova & Al., 2005; Gussev & Al., 2005; Hájek & Al., 2005; Hendrych, 1994; IVANOVA, 2004; IVANOVA, in press; JORDANOV & AL., 1974; KIRSCHNER, 1991; Kitanov & Al., 1977; Kostadinova & Dimitrov, 2002; Latowski, 1993; Petrova, A. 2000; Petrova, A. in press; Petrova, A. & al., 2005; Petrova, A. S. & Venkova, 2006; Petrova, A. S. & Venkova, in press; Petrova, A. S. & Venkova, submitted;

PLOCHEK, 1983; SAUKEL & AL., 2003; ŠTĚPÁNKOVÁ, 1994b; STOEVA, 1994; STOEVA & AL., 2005; STOYANOV, 2004; TOSHEVA, 2005; VELČEV & VASSILEV, 2002b; VLADIMIROV & DIMITROVA, 2006; VLADIMIROV & TSONEVA, 2006).

Успоредно с подготовката на Конспекта се подготвяше ново издание на "Атлас на ендемичните растения в България" (РЕТROVA, А., 2006). Във включения в атласа списък на българските ендемити (РЕТROVA, А. & VELČEV, 2006) има видове, които в част от обобщаващите издания за българската флора са разглеждани като вътревидови таксони и като такива не са били включени в предишното издание на Конспекта. Това са Alchemilla damianicensis Pawł., Centaurea kamciensis Kočev & Gančev, Colchicum rhodopaeum Kov., Hieracium asenovgradense Jasiewicz & Pawł., H. ferdinandiiregis Zahn, Jurinea bulgarica Velen.

Както това беше отбелязано и във второто издание, сме се въздържали от вземане на таксономични решения и сме отразявали валидно публикуваните от страната таксони. Понякога това е в противоречие с нашите схващания. Delipavlov (1998) публикува като нов за науката вид Oenothera bulgarica Delip. от Южна Струмска долина. Velčev & Vassilev (2002b) публикуват от същия район O. stricta Ledeb. ex Link. Според нас се касае за един и същи таксон и доколкото родът е американски, описването на нови видове от находища извън естествения им ареал не е добро решение.

В резултат на биосистематични проучвания е потвърден видовият статус на редица видове в род *Centaurea* (Ванснеva, 1999; Ванснеva & Raimondo, 2003; Ванснеva & Greilhuber, 2006). Значителни и различни по характер са промените, настъпили и в семейство *Brassicaceae* (Анčev, 1997, 2001; Анčev & Goranova, 2006; Анčev & Polatschek, 1998, 2003, 2006; Анčev & Томšovic, 1999). Съществени са и промените, резултат от задълбочено проучване на род *Achillea* в България (Nedelcheva, 1998; Saukel & Al., 2003).

В сравнение с Конспекта от 2002 г., от българската флора отпадат 20 таксона. В някои случаи се касае за погрешно съобщени за страната видове, напр. *Ophrys argolica* Н. Fleischman (BERGMAN & AL., 2004; TSVETANOV & AL., in press). Подобен е случаят с *Campanula trichocalycina* Теп., погрешно посочвана за страната вместо *Asyneuma pichleri* (Vis.) Lakušić & P. Conti (LAKUŠIĆ & CONTI, 2004). От род *Rosa* отпадат пет вида поради критична преоценка на техния статус (ZIELINSKI & AL., 2004).

Въпросът за навлизането на антропофити във флората е изключително актуален в наши дни (Ретрога, А. & Vladimirov, 2002). Регистрирани за пръв път за страната са Falopia × bohemia (Chrtek & Chrtekova) J. P. Baylei, Helianthus tuberosus L., Solidago gigantea Ait., Bidens frondosa L., Sycios angulatus L., Parthenocissus quinquefolia (L.) Planch. (Ретрога, А. S., 2006; Šимверога & Al., 2004; Теорем, 2005; Vladimirov, 2003, 2006). В Конспекта са включени видове, неотразени в предишното издание – Armoracia rusticana (Lam.) Р. Gaertn., Fraxinus americana L., F. pensylvanica H. Marshall, Gleditsia triacanthos L., Opuntia tortispina Engel, O. vulgaris Mill. (= O. compressa (Salisb.) Macbr.), Robinia pseudoacacia L.

Доколкото като ботаници интересите ни са основно свързани с флористичните проучвания, философията ни за Конспекта е той да представя нагледно разпространението на видовете в страната и да подпомага изясняването му. В тази връзка и в това издание е запазен утвърденият в предходните формат. Той обаче от своя страна налага някои ограничения. На първо място това е липсата на синоними, вътревидови таксони и коментари. Поради това в редица случаи за нас беше много трудно да вземем решение за названието под което включваме даден таксон в Конспекта, както и начина на включване на таксони, при които има различни виждания за обема им. Отчитайки, че изданието е предназначено не само за професионални ботаници, а за широк кръг читатели, сме подхождали преди всичко от практична гледна точка, предпочитайки познатите в българската ботаническа литература имена или таксономични концепции. Например, род *Centaurea* е разгледан в широк смисъл, включвайки в нейния обем родовете Cyanus, Rhaponticoides и Colymbada. Същото се отнася и за някои видове, напр. Montia fontana L. Независимо от това, по номенклатурни причини са възприети над 30 промени в имената на различни видове. Изпълняваният в института по ботаника към БАН проект за изготвяне на синонимен речник на висшите растения в България безспорно е крайно необходим и ще запълни една празнота в българската ботаническа литература.

Що се отнася до съкращенията на авторовите имена на растенията, в настоящето издание сме се постарали да следваме стандарта на BRUMMITT & POWEL (1992). Отстранени са някои досадни неточности в изписването на видовите имена, част от тях фигуриращи в някои от основните източници по българската флора.

Както и в предходното издание, хорологичната информация осъвременена с данните от достъпната литература, с резултатите проверките в българските хербариуми и по собствени непубликувани данни. Общо в Конспекта са отразени около 1500 промени в разпространението на видовете по флористични райони. Те са резултат на обобщаването на данните от 121 публикации, както съвременни, така и някои по-стари работи, данните от които са пренебрегнати в други обобщаващи издания (Albach & Vladimirov, 2002; Ančev & Polatschek, 2003; 2006; Assyov & Vassilev, 2004; ATANASOVA & MARINOVA, 2005; BANCHEVA, In press; BANCHEVA & DELCHEVA, 2004; BANCHEVA & Greihuber, 2006; Bancheva & Al., 2002, 2004; Bondev & Al., 1967; Češmedžiev, 1977; ČEŠMEDŽIEV & STOJCHEV, 1994; CHERNEVA, 2003; DELIPAVLOV, 2000; DELIPAVLOV & CHESHMEDZHIEV 2003; DENCHEV, 1970; DIMITROV & ASSYOV, 2003; DIMITROV, 2002a, b, c, d, 2004, Dimitrov & Pavlova, 2002; Dimitrov & Sidjimova, 2003; Dimitrov, & Tsonev, 2002; DIMITROV, & VUTOV, 2004, 2006, DIMOVA & VLADIMIROV, 2006; DIMOVA & AL. 2002; FILIPOVA-MARINOVA, & PETROVA, A. S., 2003; GANCHEV, & DENCHEV, 1965, 1967, 1971; GANCHEV, & KOCHEV, 1963, 1968; GEORGIEVA, 2000; GERASIMOVA & AL., 2003; GORANOVA, & VASSILEV, in press; Grozeva, & Georgieva, 2004; Grozeva, & Al., 2004; Gussev & Al., 2005; Hájek & Al., 2005; Ivanova, 1997, 1999, 2004; Ivanova, & Al. 2005; Jordanov, 1966; Jordanov & Kochev, 1973; Jordanov & Al, 1965a, 1965b, 1974; Kirschner, 1991, 1992; Kostadinova & Dimitrov, 2002; MEYER, 1985; MILANOVA, & GUSSEV, 2002; PANOV, 1972, 1996; PAVLOVA, 2004, 2006; PAVLOVA, & TOSHEVA, 2002; PAVLOVA, & AL, 2006; PEDASHENKO, submitted; PEEV & VASILEV, 1972; Petrova, A., 2000; Petrova, A. S., 2004a, b, c, 2005, 2006; Petrova, A. S. & Al., 1998, 2004, 2006; Petrova, A. S. & Al., submitted; Petrova, A. S. & Al, in prep.; RADKOV, 2003; RADOSLAVOVA, 2002; SAVCHEV, 1969; SOPOTLIEVA & PETROVA, 2001, 2002; STAFANOV & Bunkov, 1971; Stanev, 1969; Stanev, 1970; Stanev, 1971, 1979a, 1979b, 2005; Stoeva, & Popova, 1993; Stoeva & al 2005; Stoyanov, K., 2005; Stoyanov, S., 2004; S., 2005; Šumberova, & al., 2004; Tashev, 2003; Tosheva, & Pavlova, 2003; Tosheva, 2004; 2005; Trifonov, 2005; Tsonev, In press; Tsvetanov & al; in press; Tzonev, & Šumberová, 2004; Uzunova & Uzunov, 2005; Valev, 1963; 1968; Vassileva & Vihodcevsky,1974; Velchev & Bondev, 1964, 1965, 1975; Velčev & Vassilev, 1969, 1971, 2002b; Velchev & al., 1968; Velchev & al., 1973; Vihodcevsky,1963, 1968, 1977; Vladimirov, 2001, 2006; Vutov & Dimitrov, 2002; Zahariev, & Genova, 2004[2005]; Žukowski, 1993 и т.н.).

При отделни видове промените в разпространението са значителни, напр. при *Carex panicea* L. (Assyov & Vassilev, 2004; Petrova, A. S., 2005; Petrova, A. S. & Al., submitted), *Eleocharis uniglumis* (Link) Schultes (Hájek & Al. 2005; Petrova, A. S., 2005), *Scabiosa argentea* L. (Assyov & Vassilev, 2004; Petrova, A. S., 2005; Petrova, A. S. & Al., submitted) и др. Понякога целенасочените проучвания показват, че видове считани за редки, в действителност са доста широко разпространение в страната. Такива са *Buglossoides glandulosa* (Velen.) R. Fern. (Кікуакоv & Реткоva, A., 2003), *Thesium linophyllon* L. (Реткоva, A. S., Assyov, Vassileva & Goranova, in prep.) и др. Пример за прецизно отразяване на хорологията са работите на Ivanova (2004), Sтоуаnov, K. (2005) и др.

Най-голям брой са съобщенията за флорен район Стара планина (над 200), което е свързано преди всичко с публикацията на Grozeva & Al. (2004), на Dimitrov, 2005; Ретrova, A. S., 2004а, както и някои по-стари работи (Ganchev & Denchev, 1965, 1967, 1971) и др. Значителен е броят на новите записи за Родопите, общо около 150 за трите подрайона (Bancheva & Al., 2004; Pavlova, 2004; Petrova, A. S., 2004c, 2005; Petrova, A. S. & Al., 2004, 2006 и др.). На трето място се нарежда Средна гора, за където има голям брой нови съобщения и по-стари публикации от редица автори (Assyov & Vassilev, 2004; Dimitrov, 2002; Pedashenko, submitted; Petrova, A. S., 2004b; Stanev, 1979a; Velčev & Vassilev, 2002, и др.). Родове, за които има значителен брой нови данни са Achillea, Carex, Centaurea, Cerastium, Silene.

Натрупаният опит от трите издания на Конспекта ни убеждава в необходимостта от поддържане на съвременна и достъпна база от данни за състава на флората на България и хорологията на видовете. Така ще се избегнат случаите на неколкократно публикуване на "нови" за страната и отделни райони видове. Впечатляващ в това отношение е случаят с Bellevalia sarmatica (Pall. ex Georgi) Woronov, публикувана последователно от PRODAN (1939), Кіталоv & Al. (1980), Векс & Al. (1989) и Delipavlov (1998). Аналогично, Кпаитіа degenii Borb. ex Form., е съобщена от Кра́ (1983), Gussev (1998) и Delipavlov & Češmedžiev (1998). Тук могат да се добавят още Carex caespitosa L. (Jordanov & al., 1974; Stoeva & Al., 2005). Нерядко интересни флористични данни остават "скрити" в кариологични проучвания, напр. Carex elata All. (Stoeva, 1994), Sesleria robusta Schott, Nym. & Kotschy (Petrova, A., 2000).

Осмислянето на този значителен фактологичен материал за флората на България ни навежда на някои обобщения, които бихме желали да споделим. Освен традиционно сложните в таксономично отношение родове (напр. *Rosa*, *Rubus* и др.), се очертават родове, в които изглежда е необходима

задълбочена работа за изясняване на състава им в българската флора (Cerastium, Colchicum, Dactylorhiza, Dianthus, Epipactis, Gagea, Ornithogalum, Orobanche, Scilla, Sesleria, Viola). Многобройни са също така и родовете, в които редица видове се нуждаят от изясняване на актуалното разпространение в страната – Aegilops, Agrostis, Arum, Bromus, Carex, Elymus, Euphorbia, Festuca, Iris, Phleum).

Благодарности

Работата по Конспекта се оказа трудоемка и трудна задача, която надали била успешна в кратките срокове, ако не бе съдействието на много колеги и приятели. Преди всичко нашите сърдечни благодарности на д-р Анна Петрова за предоставените публикации и данни, за изключителната отзивчивост към многобройните ни и разностранни въпроси. Благодарим за предоставената информация, публикации и консултации на колегите Чавдар Гусев, Владимир Владимиров, проф. Илия Чешмеджиев, проф. Минчо Анчев, д-р Светлана Банчева, Стоян Стоянов, д-р Росен Цонев, Валя Горанова, Христо Педашенко. Специални благодарности за предоставените данни и критичните бележки дължим също така на Даниела Иванова върху папратовидните растения и на Анита Тошева върху род Lathyrus. Благодарим на кураторите на хербариумите на Института по ботаника, БАН (SOM), Софийски университет "Св. Климент Охридски" (SO) и Аграрния университет, Пловдив (SOA) за любезността и оказаното съдействие. Накрая, но не на последно място използваме възможността да изкажем своята благодарност на институциите, в които работим, за създадените условия за ползотворна работа. Новата информация в Конспекта е резултат и на дългогодишна работа в различни краища на страната. Благодарим на всички колеги и приятели, с които сме работили съвместно на терена.

FOREWORD TO THE THIRD EDITION

The species diversity of an individual territory is a dynamic figure depending on the emergence of new species and the extinction of others. The species lists regarding specific territory (Flora, Conspectus) change because of the species diversity changes, but also as a result of introduction of more contemporary taxonomic concepts and ideas. In the beginning of 2006, when it became clear that the second edition of the Conspectus (2002) was almost completely out of print, the above considerations brought to the logical solution of preparing a new edition.

Despite of the short period since the printing out of the second edition this time was dedicated to extensive studies of the Bulgarian flora. A number of projects have just been finalized or have been on-going. Part of them involve intensive field work, covering the whole territory of the country. The Institute of Botany at the Bulgarian Academy of Sciences has hosted some of these projects: "Biodiversity of the Flora and the Vegetation of the Rhodopes" (2001–2003), "Study of the Grass Communities in Bulgaria" (2002–2004), "Evaluation of the potential Important Plant Areas Bulgaria" (2003-2005), "Red Lists of plants and fungi" (2003-2005), "Red Data Book of Bulgaria, Volume I Plants and Fungi" (2004–2007), "Evaluation of the Alien to the Bulgarian Flora and Mycota Species" (2005–2007). The studies concerned with the elaboration of management plans for protected areas, including spatious ones like the National and Nature Parks (Central Balkan, Rila, Pirin, Vitosha, Strandja, Sinite Kamani, Rila Monastery, Rusenski Lom), as well as these of a number of nature reserves, have enriched the chorological information on a number of species. The projects aiming at the establishment of the NATURA 2000 network in Bulgaria have also contributed.

Extremely important for clarifying the Bulgarian flora composition have also been the biosystematic studies amongst which during the last years especially noticeable have been these concerned with the fern plants, as well as with the families Asteraceae (genera Achillea, Centaurea, Hieracium, Crepis), Brassicaceae, Campanulaceae, Fabaceae of the flowering plants.

Being directly dependent of the studies intensity, a number of publications on the Bulgarian flora have been issued during this period. An extensive review of the studies and the publications during the period 1993–2004 have provided Petrova, A. & Al. (2005). In 2003 Field Guide to the Plants in Bulgaria (Delipavlov & Češmedžiev, 2003) has been published, which includes 3,800 wild and 530 introduced and cultivated species.

The present third edition of the Conspectus includes a total of 3,997 vascular plant species, which number exceeds by 147 the number of species included in the previous edition. Substantial difference makes the inclusion of species the occurrence of which in the Bulgarian flora is probable but not confirmed yet. Justification for including most of them (26 species) in the present Conspectus provides the fact they are mentioned under question in The Vascular Plants Guide Book (Kozhuharov, 1992). The inclusion of the other species is justified by different papers and publications (Ančev, 2001; Erben, 2002; Fröhner, 1997,

etc.). In the cases when a species is supposed to occur in a specific region, it is indicated by a question mark ("?") on the region (regions). When the occurrence of the species in Bulgaria is supposed without indications for a specific region the question mark is posed on the map of the whole country.

The new for the science species described in the country in this period include Alyssum orbelicum Ančev & Uzunov (Ančev & Uzunov, 2002), Bolboschoenus platycarpus Marhold, Hroudová, Ducháčec & Zákravský (Marhold & Al., 2004), Festuca achtarovii Velčev & Vassilev, F. calcarea Velčev ex Denchev, F. maleschevica Velčev & Vassilev, F. staroplaninica Velčev, F. vandovii Velčev ex Denchev, (Denchev, 2004; Velčev, 2002; Velčev & Vassilev 2002a), Hieracium kittaniae Vladimir., H. petrovae Vladimir. & Szelag (Vladimirov, 2003a; Vladimirov & Szelag, 2006), Vicia jordanovii Velčev (Velčev, 2002).

A number of species described for Bulgaria before 2002 that have not been covered by the previous edition have also been added. Such are: *Alchemilla sirjaevii* Plochek (PLOCHEK, 1983), *Bromus orbelicus* (Velen.) Petrova, Kožucharov & Ehrend. (PETROVA, A. & Al., 1997), *Bromus parilicus* Petrova, Kožucharov & Ehrend. (PETROVA, A. & Al., 1997), *Carex riloensis* Stoeva & Popova (Stoeva & Popova, 1993), *Myosotis margaritae* Štěpánková (Štěpánková, 1993). The number of species included for the first time in the Conspectus belonging to the *Taraxacum* genus is impressive – a total of 43. Among them are 20 species described from Bulgaria (Doll, 1978; Kirschner & Štěpánek 1993, 1998). In the light of the changes that have occurred in the taxonomic concept of this genus, the status of some of these species (Doll, 1978) could become a subject of a future critical review.

The new to the country species and the ones that are not covered by the previous edition of the Conspectus are: Achillea asplenifolia Vent., Arabis ciliata Clairv., Bulpeurum ranunculoides L., Carex caespitosa L., C. elata All., C. hartmanii Cajander, C. lasiocarpa Ehrh., Centaurium littorale (Turn.) Gilm., Cerastium tenoreanum Ser., Clypeola microcarpa Moris, Crocus pallidus Kitanov & Drenkovsky, Dryopteris affinis (Lowe) Fraser-Jenk., Epipactis gracilis B.& H. Baumann, E. greuteri H. Baumann & Künkele, E. leptochila (Godgery) Godfery, E. pontica Taubenheim, Equisetum × moorei Newman, Geranium aristatum Freyn. & Sint., Gymnadenia densiflora (Wahlenb.) A. Dietr., Lathyrus filiformis (Lam.) Gay, Leontodon saxatilis Lam., L. tuberosus L., Linaria angustissima (Loisel) Borbás, Luzula divulgata Kirshner, L. falax Kirschner, Myosotis michaelae Štěpánková, Ophrys reinholdii Spruner ex Fleishm., Polycarpon diphyllum Cav., Polypodium interjectum Shivas, P. × mantoniae Rothm., Quercus trojana Webb., Rumex confertus Willd., Sagittaria latifolia Willd., Sesleria argentea (Savi) Savi, S. autumnalis (Scop.) F.W. Schultz, S. robusta Schott, Nym. & Kotschy, S. filifolia Hoppe, S. uliginosa Opiz, Thesium procumbens C.A. Mey, Thlaspi viridisepalum (Podp.) Greuter & Burdet, Thymelaea gussonei Boreau, Tragopogon floccosus Waldst. & Kit., Vulpia fasciculata (Forssk.) Samp. (ANČEV, 2001; BERGMAN & AL., 2004; Delipavlov, 2000; Delipavlov & Češmedžiev, 2003; Dimitrova & Al., 2005; Gussev & Al., 2005; Hájek & Al., 2005; Hendrych, 1994; Ivanova, 2004; Ivanova, in press; Jordanov & Al., 1974; Kirschner, 1991; Kitanov & Al., 1977;

Kostadinova & Dimitrov, 2002; Král 1988, Latowski, 1993; Petrova, A. 2000; Petrova, A., in press; Petrova, A. & al., 2005; Petrova, A. S. & Venkova, 2006; Petrova, A. S. & Venkova, in press; Petrova, A. S. & Venkova, submitted; Plochek, 1983; Saukel & al., 2003; Štěpánková, 1994b; Stoeva, 1994; Stoeva & al., 2005; Stoyanov, 2004; Tosheva, 2005; Velčev & Vassilev, 2002b; Vladimirov & Dimitrova, 2006; Vladimirov & Tsoneva, 2006).

The new edition of the Atlas of the Endemic Plants in Bulgaria has been elaborated in parallel with the Conspectus (Petrova, A., 2006). The list of the Bulgarian endemic species included in the Atlas (Petrova, A. & Velčev, 2006) contains species, which are presented as intraspecific taxa in some of the general publications on the Bulgarian flora and being such, have not been included in the previous edition of the Conspectus. Such are: Alchemilla damianicensis Pawł., Centaurea kamciensis Kočev & Gančev, Colchicum rhodopaeum Kov., Hieracium asenovgradense Jasiewicz & Pawl., H. ferdinandii-regis Zahn, Jurinea bulgarica Velen.

As already noted in the second edition we have in general restrained from making taxonomic decisions and have reflected the taxa validly published for the country. Sometimes this has been in contradiction with our perceptions. Delipavlov (1998) has published *Oenothera bulgarica* Delip. from the Southern Struma Valley as a new species for the science. Velčev & Vassilev (2002b) have published *O. stricta* Ledeb. ex Link from the same region. The same taxon is most probably concerned in this case. Given that the genus *Oenothera* is American the describing of new species for localities outside their native range of distribution does not seem to be a good decision.

Resulting from the biosystematic studies, the species status of a number of species belonging to the *Centaurea* genus has been confirmed (Bancheva, 1999; Bancheva & Raimondo, 2003; Bancheva & Greilhuber, 2006). Substantial and of different character have also been the changes concerning the *Brassicaceae* family (Ančev, 1997, 2001; Ančev & Goranova, 2006; Ančev & Polatschek, 1998, 2003, 2006; Ančev & Tomšovic, 1999). Significant are also the changes resulting from the comprehensive study of *Achillea* genus in Bulgaria (Nedelcheva, 1998; Saukel & Al., 2003).

Compared to the 2002 Conspectus 20 taxa have been excluded from the Bulgarian flora. In some cases this concerns species that have been reported for the country by mistake, for example. *Ophrys argolica* H. Fleischman (BERGMAN & AL., 2004; TSVETANOV & AL., in press). Similar is the case with *Campanula trichocalycina* Ten., wrongly reported for the country instead of *Asyneuma pichleri* (Vis.) Lakušić & P. Conti (LAKUŠIĆ & CONTI, 2004). Following the critical review of the status five species have been excluded from *Rosa* genus (ZIELIŃSKI & AL., 2004).

The issue with the introduction of anthropophytes in the flora is extremely important now-a-days (Petrova, A. & Vladimirov, 2002). The following have been registered for the first time in the country: Fallopia × bohemia (Chrtek & Chrtekova) J. P. Baylei, Helianthus tuberosus L., Solidago gigantea Ait., Bidens frondosa L., Sycios angulatus L., Parthenocissus quinquefolia (L.) Planch.

(Petrova, A. S., 2006; Šumberova & Al., 2004; Tzonev, 2005; Vladimirov, 2003, 2006). The authors judgments have justified the inclusion of some other adventive species in the previous edition – *Armoracia rusticana* (Lam.) P. Gaertn., *Fraxinus americana* L., *F. pensylvanica* H. Marshall, *Gleditsia triacanthos* L., *Opuntia tortispina* Engel, *O. vulgaris* Mill. (= *O. compressa* (Salisb.) Macbr.), *Robinia pseudoacacia* L.

Given that our interests as botanists are especially concerned with the floristic studies, the philosophy of the Conspectus is to present in a visual manner the species distribution in the country and to facilitate its clarifying. In this relation, the design accepted for the previous editions is also kept in the current one. However, it has imposed certain limitations. At first place this is the lack of synonyms, intraspecific taxa and comments. Therefore, in a number of cases it has been especially difficult for us to take decision on the name under which an individual taxon to be included in the Conspectus, as well as on the mode of inclusion of taxa for which volume different visions exist. Considering that the edition is addressing not only the professional botanists but a large range of readers we have tried to be as practical as possible preferring the popular in the Bulgarian botanic literature names or taxonomic concepts. For example, Centaurea genus has been discussed in the broad sense, including in its volume also the genera Cyanus, Rhaponticoides and Colymbada. The same refers to some species, for example Montia fontana L. Despite of this, more than 30 changes in names of the different species have been accepted for nomenclature reasons. Undoubtedly, the Synonym glossary of the vascular plants in Bulgaria elaborated under a project of The Institute of Botany, BAS is more than needed and will fill an important gap in the Bulgarian botanical literature.

Concerning the abbreviating of the plant author names the present edition has tried to follow the standard of BRUMMITT & POWEL (1992). Some boring inaccuracies in the spelling of the species names have been corrected, although part of them are also present in some of the main sources for the Bulgarian flora.

Similar to the previous edition the chorological information has been updated with information from the available literature, with the results from the review of the Bulgarian herbaria and with our own unpublished data. A total of some 1,500 changes in the species distribution by floristic regions have been reflected in the Conspectus. They result from summarizing the data of the above cited sources as well as other 121 publications, both contemporary and historical, the data of which have been neglected by other summarizing publications (Albach & VLADIMIROV, 2002; ANČEV & POLATSCHEK, 2006; ASSYOV & VASSILEV, 2004; ATANASOVA & MARINOVA, 2005; BANCHEVA, in press; BANCHEVA & DELCHEVA, 2004; Bancheva & Greilhuber, 2006; Bancheva & Al., 2002, 2004; Bondev & Al., 1967; CHERNEVA, 2003; ČEŠMEDŽIEV, 1977; ČEŠMEDŽIEV & STOJCHEV, 1994; DELIPAVLOV, 2000; Delipavlov & Cheshmedzhiev 2003; Denchev, 1970; Dimitrov, 2002a, b, c, d, 2004; 2005, Dimitrov & Assyov, 2003; Dimitrov & Pavlova, 2002; Dimitrov & SIDJIMOVA, 2003; DIMITROV, & TZONEV, 2002; DIMITROV, & VUTOV, 2004; 2006, DIMOVA & VLADIMIROV, 2006; DIMOVA & AL. 2002; FILIPOVA-MARINOVA, & PETROVA, A. S. 2003; GANCHEV, & DENCHEV, 1965, 1967, 1971; GANCHEV, & KOCHEV, 1963,

1968; Georgieva, 2000; Gerasimova & Al., 2003; Goranova, & Vassilev, in press; Grozeva, & Georgieva, 2004; Grozeva, & al., 2004; Gussev & al., 2005; Hájek & AL., 2005; IVANOVA, 1997, 1999, 2003; IVANOVA, & AL. 2005; JORDANOV, 1966; JORDANOV & KOCHEV, 1973; JORDANOV & AL, 1965a, b, 1974; KIRSCHNER, 1991, 1992; Kostadinova & Dimitrov, 2002; Meyer, 1985; Milanova, & Gussev, 2002; PANOV, 1972, 1996; PAVLOVA, 2004, 2006; PAVLOVA, & TOSHEVA, 2002; PAVLOVA, & AL, 2006; PEDASHENKO, submitted; PEEV & VASILEV, 1972; PETROVA, A. 2000; Petrova, A. S., 2004a, b, c, 2005, 2006; Petrova, A. S. & Al., 1998, 2004, 2006; PETROVA, A. S. & AL., submitted; PETROVA, A. S. & AL, in prep.; RADKOV, 2003; RADOSLAVOVA, 2002; SAVCHEV, 1969; SOPOTLIEVA & PETROVA, A. S., 2001, 2002; STEFANOV & BUNKOV, 1971; STANEV, 1969, 1970, 1971, 1979a, b, 2005; STOEVA, & Popova, 1993; Stoeva & Al., 2005; Stoyanov, K., 2005; Stoyanov, S., 2004, 2005; Šumberova, & al., 2004; Tashev, 2003; Tosheva, 2004; 2005; Tosheva, & Pavlova, 2003; Trifonov, 2005; Tsvetanov & Al; in press; Tzonev, & Šumberová, 2004; TZONEV, in press; UZUNOVA & UZUNOV, 2005; VALEV, 1963; 1968; VASSILEVA & VIHODCEVSKY, 1974; VELČEV & BONDEV, 1964, 1965, 1975; VELČEV & VASSILEV, 1969, 1971, 2002b; Velčev & Al., 1968, 1973; Vihodcevsky, 1963, 1968, 1977; VLADIMIROV, 2001a, 2001b, 2006; VUTOV & DIMITROV, 2002; ZAHARIEV & GENOVA, 2005; Žukowski, 1993, etc.).

The changes in the distribution have been significant for individual species, for example *Carex panicea* L. (Assyov & Vassilev, 2004; Petrova, A. S., 2005; Petrova, A. S. & Al., submitted), *Eleocharis uniglumis* (Link) Schultes (Hajek & Al., 2005; Petrova, A. S., 2005), *Scabiosa argentea* L. (Assyov & Vassilev, 2004; Petrova, A. S., 2005; Petrova, A. S. & Al., submitted) etc. Sometimes the specific studies prove that species regarded as rare have in fact been relatively widely distributed in the country. Such are *Buglossoides glandulosa* (Velen.) R. Fern. (Kiryakov & Petrova, A. 2003), *Thesium linophyllon* L. (Petrova, A. S., Assyov, Vassilev & Goranova, in prep.), etc. Examples of precise reflection of chorology have been the papers of Ivanova (2003), Stoyanov, K. (2005), etc. The rediscovery of species considered since now extinct from the territory of the country, for example *Astragalus physocalyx* Fisch. (Stoyanov & Al., 2006) should also be noted.

The largest is the number of the floristic entries from Stara Planina (over 200), which are mostly connected with the publications of Grozeva & Al. (2004) also of Dimitrov, 2005; of Petrova, A. S., 2004a, as well as some older papers (Ganchev & Denchev, 1965, 1967, 1971, etc.). The number of the new entries for the Rhodopes is also significant, a total of some 150 for the three sub-regions (Bancheva & Al., 2004; Pavlova, 2004; Petrova, A. S., 2004c, 2005; Petrova, A. S. & Al., 2004, 2006, etc.). The third ranks Sredna Gora, where a large number of new reports and older publications from a number of authors exist (Assyov & Vassilev, 2004; Dimitrov, 2002c; Pedashenko, submitted; Petrova, A. S., 2004b; Stanev, 1979a; Velčev & Vassilev, 2002, etc.). The genera for which a substantial volume of new data is present are *Achillea, Carex, Centaurea, Cerastium, Silene*.

The experience gained through the three editions of the Conspectus has convinced us in the need of maintenance of updated and accessible data base on the Bulgarian flora composition and the species distribution. This will help avoid the cases of repeated publication of "new" to the country and individual regions species. In this respect the case with *Bellevalia sarmatica* (Pall. ex Georgi) Woronov, published consequently by PRODAN (1939), KITANOV & AL. (1977), BERG & AL. (1989) and DELIPAVLOV (1998) is impressive. Analogous is the situation with *Knautia degenii* Borb. ex Form., reported by KRÁL (1983), Gussev (1998) and DELIPAVLOV & ČEŠMEDŽIEV (1998). We can also add *Carex caespitosa* L. (JORDANOV & al., 1974; Stoeva & Al., 2005) to this list. Quite often interesting floristic data remain hidden into the karyologic studies for example *Carex elata* All. (Stoeva, 1994), *Sesleria robusta* Schott, Nym. & Kotschy (Petrova, A., 2000).

The comprehension of this substantial factual data on the flora of Bulgaria inevitably brings to certain generalizations. Besides the genera that are traditionally complex in taxonomic terms (for example *Hieracium*, *Rosa*, *Rubus*, *Taraxacum*, etc.), genera emerge which need in-depth exploration to clarify their composition in the Bulgarian flora (*Cerastium*, *Colchicum*, *Dactylorhiza*, *Dianthus*, *Epipactis*, *Gagea*, *Ornithogalum*, *Orobanche*, *Scilla*, *Sesleria*, *Viola*). The genera in which a number of species need actual distribution clarifying are also numerous (*Aegilops*, *Agrostis*, *Arum*, *Bromus*, *Carex*, *Elymus*, *Euphorbia*, *Festuca*, *Iris*, *Phleum*).

Acknowledgements

The elaboration of the Conspectus turned out to be a laborious and complex task, which would hardly be successfully accomplished without the cooperation of many colleagues and friends. First of all we wish to cordially thank Ana Petrova, Ph.D. for the publications and data made available, for the readiness to discuss our numerous and diverse questions. We thank for the information, publications and consultations offered by the colleagues Čavdar Gussev, Vladimir Vladimirov, Prof. Iliya Češmedžiev, Prof. Minčo Ančev, Svetlana Bantcheva Ph.D., Stoyan Stoyanov, Rossen Tzonev Ph.D., Valya Goranova, Hristo Pedashenko. Our special thanks for the data provided and the critical comments also go to Daniela Ivanova (on the ferns) and Anita Tosheva (on Lathyrus genus). We also thank to the curators of herbaria of the Institute of Botany, BAS (SOM), University of Sofia "St. Kliment Ohridski" (SO) and the Agrarian University in Plovdiv (SOA) for the kind cooperation. Last but not least we use the opportunity to tanks to the institutions in which we work for the favorable conditions for fruitful work. The new information in the Conspectus is a result of many years of botanical studies in different parts of the country. We thank all friend and colleagues with whom we worked together in the field.

ПРЕДГОВОР КЪМ ВТОРОТО ИЗДАНИЕ

Въпреки своята неголяма територия България разполага с твърде богата и разнообразна флора, обусловена от срединното географско положение на страната, нейния разнообразен ландшафт и превратната геоложка история на нейните земи. Тук се срещат над 3800 вида висши растения (без мъховете), което представлява над половината от общото видово богатство на Балканския полуостров. На този фон в българската флора се развива богат ендемичен елемент, включващ както балкански, така и български ендемити, съставляващи около 8% от растителното богатство на страната (VELCHEV & AL., 1992).

Хорологични данни

Българската флора понастоящем се смята за сравнително добре проучена във флористично отношение (РЕЕV & AL., 1993). Активните изследвания през последните години, довели до натрупването на голямо количество данни (cf. РЕТROVA, A., 2001), дават обаче основания да се каже, че процесът все още не е завършил. Разпознаването и описването на нови за науката таксони, в т.ч. и с видов ранг, е нерядко събитие (АNČEV & POLATSCHEK, 1998; ČEŠMEDŽIEV, 1997; DELIPAVLOV, 1990, 1998; ERBEN, 1989; PANOV, 1996; PAVLOVA & AL., 1999; SZELĄG, 2001). В резултат на таксономични проучвания се потвърждава стойността на таксони, пренебрегвани от чуждестранните изследователи (Макноld & Ančev, 1999) или се коригират схващанията за видовата принадлежност на представители на българската флора (Delipavlov, 1987; Pavlova & Kozhuharov, 1994).

С настоящия Конспект се цели натрупаната информация да стане достъпна за по-широк кръг ботаници и любители. При неговото съставяне за таксономична база е възприет Определител на висшите растения в България (Коzhuharov, 1992), като са внесени необходимите допълнения. Изключение е направено за семейство Orchidaceae (по Petrova, A. S. & Al., ined.) и родовете Allium L. (по Чешмеджиев в Delipavlov, 1992a, 413–418 pp.), Verbascum L. (по Стефанова-Гатева в Jordanov, 1995, 26–30 pp.), Linaria L. (по Делипавлов & Попова в Jordanov, 1995, 111–124 pp.), както и за някои родове от семейство Brassicaceae (по Anchev, 2001). Използвана е многотомната академична "Флора на Република България" (Jordanov, 1964–1995). Описаните от различни автори нови за науката таксони са възприети така, както са били публикувани, като съставителите са се въздържали да вземат отношение по техния статус (с изключение на видовете, описани от Georgiev, D., 1997, при чието обнародване авторът не е спазил правилата на Международния кодекс за ботаническа номенклатура).

Включени са новосъобщените или потвърдени за България видове, отнасящи се понякога към нови за страната родове и дори семейства (Ančev & Goranova, 1997; Bancheva & Denchev, 2000; Berg & Al., 1989; Češmedžiev, 1988; Delipavlov, 1980, 1990, 1992b, 1998, 1999; Delipavlov & Češmedžiev, 1984a, b, 1989; Delipavlov & Stojchev, 1994; Deneva & Ljubenova, 1996; Dimitrov, 1997, 1998; Dimitrov & Denchev, 1999; Dimitrov & Lazarov, 2001;

Dimitrov & Al., 1997, 2001; Gerasimova & Al., 1998; Gussev, 1997; Gussev & Dimitrov, 1997; Gussev & Al., 1997; Gussev, Denchev & Al., 1998; Gussev, Uzunov & Al., 1998; Kitanov & Al., 1987; Kocheva & Dimitrov, 1997; Linding & Linding, 1991; Markova & Černeva, 1984; Niketič, 2000; Pashaliev & Dimitrov, 1994; Pavlova & Kozhuharov, 1994; Pavlova & Al., 1997, 2000; Petrova, A. S. & Al., 1998; Roussakova, 1995, 1996; Siering & Henning, 1989a, b, c; Stoeva, 1991; Stojanov, S., 1998; Tan & Vladimirov, 2001; Tashev, 2002; Velchev & Al., 1989; Zielinski, 1992).

Отразени са резултатите от ревизиите на българските представители на родовете *Avena* L. (Delipavlov, 1999) и *Crataegus* L. (cf. Zielinski & Al., 2001), както и някои данни от дисертационните разработки върху род *Achillea* L. секция *Filipendulinae* (Nedelcheva, 1998) и род *Centaurea* L. секции *Cyanus* и *Lepteranthus* (Bancheva, 1999).

Хорологичната информация, представена в Конспекта, е актуализирана с достъпните новопубликувани съобщения за разпространението на отделни видове в страната (Apostolova & Denchev, 1997; Bondev & Ljubenova, 1984; ČERNEVA, 1997; ČEŠMEDŽIEV & VODENICHAROV, 1998; ČEŠMEDŽIEV & AL., 1998; Delipavlov, 1988, 1990, 1992b, 1998; Delipavlov & Češmedžiev, 1984a, b, 1989, 1997; Delipavlov & Stojchev, 1994; Delipavlov & Al., 1984; Denchev & Al., 1997, 2000; Dimitrov, 1988, 1990, 1991, 1994a, b, 1995, 2002; Dimitrov & Denchev, 1997, 1999; Dimitrov & Georgiev, 1999; Dimitrov & Gussev, 1994; Dimitrov & LAZAROV, 2001; DIMITROV & NIKOLOV, 1998; DIMITROV & PAVLOVA. 2000; DIMITROV & Vutov, 2000; Georgiev, V., 1997; Gussev & Novoselski, 1997; Gussev & Al., 1997, 1998a, b; Kitanov & Al., 1987; Koceva & Dimitrov, 1994; Meshinev & Al., 2000; Nedelcheva, 1998; Nyagolov & al., 2001; Pashaliev & Dimitrov, 1994; Pashaliev, 1995; Pavlova & Nedelcheva, 2001; Pavlova & al., 1997; Petrova, A. S. & al., 1998, 1999, 2001; Sopotlieva & Petrova, A. S., 2001; Stojanov & Georgiev, 2001; Tashev, 2001; Tzonev, 1997, 2000; Uzunov, 1997; Uzunov & Al., 1998; Vladimirov, 2001a, b; Vladimirov & Kozhuharov, 1999; Vutov & Dimitrov, 2000a, b; Zhelev & GOGUSHEV, 2000). Отразени са сведенията, получени от проучванията в Българо-Швейцарската програма рамките на за опазване биоразнообразието (1994-2000), както и резултатите от ревизиите на хербарните колекции на Софийския университет (SO) и Висшия селскостопански институт - гр. Пловдив (SOA, IAP). Използвани са също така и няколко по-стари съобщения и ревизии, по една или друга причина останали неотразени в основните литературни източници (BONDEV & AL., 1976, 1979; Browicz & Zielinski, 1977; Ganchev & Denchev., 1971; Ganchev & Kochev, 1963, 1968; Hinkova, 1960; Jordanov & Markova, 1970; Jordanov & Al., 1965, 1968; PANOV, 1975a, b, c, 1978; STOJANOV, N., 1965; VELCHEV & AL., 1966).

Отпадат от състава на българската флора Achillea biebersteinii Afan. (по Nedelcheva, 1998), Astragalus fraxinifolius DC. (Pavlova & Kozhuharov, 1994) и Celtis caucasica Willd. (Browicz & Zielinski, 1977), тъй като съобщенията за тях се базират на погрешно определени материали. Дискусионен е въпросът за намирането у нас на Adenophora liliifolia (L.) DC., Aruncus dioicus (Walter) Fernald, Dactylorhiza majalis (Reichenb.) P. F. Hunt et Summerhayes, Globularia trichosantha Fisch. et C. A. Meyer, Teucrium botrys L. и др., от които в

българските хербариуми няма съхранени образци; поради това тези видове не са включени в Конспекта.

Потвърдено е разпространението на Aldrovanda vesiculosa L. (Ваеva, 1992), Carex rupestris Bell. ex All., Hammarbia paludosa (L.) О. Kuntze (Vodenicharov & Vassilev, 1999), Lathyrus pančičii (Juris.) Adam. (Реткоva, А. S., Арозтоlova & Georgiev, in prep.) и Viola pumila Chaix (Andreev, 1993), считани доскоро за изчезнали от нашата флора. Присъствието в България на видове като Ammania verticillata (Ard.) Lam., Angelica archangelica L., Astragalus cornutus Pallas, Caldesia parnassifolia (Bassi) Parl., Hypericum setiferum Stefanov, Liparis loeselii (L.) L. C. Richard, Salix rosmarinifolia L., Tetragonolobus maritimus (L.) Roth, Theligonum cynocrambe L. в наши дни е несигурно (Velchev, 1984), но те остават част от българската флора. Това важи и за Arnica montana L., индентифицирана по хербарни материали от Д. Димитров по време на работата по изготвянето на Конспекта.

В Конспекта са включени непубликувани до момента данни за разпространението на някои нови или потвърдени за страната видове. Подробна информация за тези находки ще бъде съобщена другаде (DIMITROV & ASSYOV, submitted; DIMITROV & SIDJIMOVA, submitted; Kostadinova & DIMITROV, submitted; Tzonev & Zielinski, accepted; Petrova, A. S. & Al., ined., DIMITROV, ined.).

Известните за българската флора хибридни комбинации не са отразени в това издание. Обстоен преглед на хибридите при българските висши растения е направен от Ančev (1984).

Разпространението на отделните видове следва възприетата във "Флора на НР България" (JORDANOV, 1966) фитогеографска подялба, тъй като това осигурява лесна връзка между Конспекта и предишни флористични издания. Надморските височини за по-голямата част от видовете са посочени по Коzhuharov (1992). Корекции има за видовете, за които в цитираната литература има посочени различни данни за горната или долната граница на вертикално разпространение, и в случаите, когато съставителите имат лични конкретни наблюдения.

Защитените видове са отбелязани на основата на списъка в Приложение 3 на Проектозакона за опазване на биоразнообразието, който е в процес на приемане от Народното събрание на Република България.

Флорни елементи

Флорен елемент е група от видове, произлизащи от един и същ флорен район. Географското положение на България обуславя значително разнообразие на флорни елементи. Долините на реките Струма, Места, Марица и Арда, както и южните части на Черноморското крайбрежие са пътища за навлизането в българската флора на множество средиземноморски елементи. Някои от тях достигат на север до южните склонове на старопланинската верига, където на места се формират медитерански оазиси. Уникална по своя характер е флората на Странджа планина, с наличието в нея на реликтни евксински видове. От югоизток в нашата флора проникват някои предноазиатски елементи, а в североизточна посока тя се обогатява и с понтийски видове, характерни за степите на Северното

Черноморие и Каспийско море. От северозапад старопланинската верига е важен път за навлизането на алпо-карпатски геоелементи, а в югозападна посока, по планинските масиви на Осоговска планина, Влахина, Огражден и Пирин, развитие получава и скардо-пиндският ендемичен флорен елемент. Отделна група са настанилите се у нас в резултат на човешка дейност чуждоземни видове, които в това издание са означени като адвентивни, независимо от времето и начина на пристигането им (виж РЕТROVA, А. & VLADIMIROV, 2001).

В настоящия Конспект отнасянето на видовете към даден флорен елемент е направено по класификацията на Walter, с някои изменения и допълнения.

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В изданието вероятно могат да бъдат открити пропуски и неточности. На всички, които чрез своите критични бележки ще спомогнат те да бъдат отстранени, съставителите изказват предварително своята благодарност. Коментари, забележки и нови хорологични данни са очаквани на електронните адреси на авторите.

INTRODUCTION TO THE SECOND EDITION

In spite of the its small territory Bulgaria boasts of quite rich and diverse flora, which is due to the medial geographic location of the country, its varied landscape and the turns in its geological history of its lands. More than 3800 higher plants species (without the mosses), which is more than half of the flora on the Balkan peninsula, occur there. On this background the Bulgarian flora features a rich endemic component including both Balkan and Bulgarian endemic species, which constitute about 8% of the country's flora (Velchev & Al., 1992).

Plant distribution data

Presently the Bulgarian flora is considered to be comparatively well studied in floristic respect (PEEV & AL., 1993). However, the active research in the last few years, which led to the accumulation of quite a big amount of new data (cf. Petrova, A., 2001), shows that the study process cannot be considered completed. The identifying and describing of taxa new for the science, including such ranking as species, is not an infrequent event (ANČEV & POLATSCHEK, 1998; Češmedžiev, 1997; Delipavlov, 1990, 1998; Erben, 1989; Panov, 1996; Pavlova & Al., 1999; Szelag, 2001). Taxonomical studies confirm the value of taxa neglected by foreign researchers (Marhold & Ančev, 1999) or correct the understanding of the species affiliation of some elements of the Bulgarian flora (Delipavlov, 1987; Pavlova & Kozhuharov, 1994).

This Conspectus aims at bringing the existing information to a broader circle of botanists and students. In the compiling of this book the taxonomic basis used by Kozhuharov in "Identification guide to the vascular plants in Bulgaria" (1992) has been used with some additions and amendments. Exceptions have been made for the family of *Orchidaceae* (according to Petrova, A. S. & Al., ined.), for the genera *Allium L.* (according to Češmedžiev in Delipavlov, 1992a, 413–418 pp.), *Verbascum* L. (according to Stefanova-Gateva in Jordanov, 1995, 26–30 pp.), *Linaria L.* (according to Delipavlov in Jordanov, 1995, 111–124 pp.), and certain genera of the family of *Brassicaceae* (Anchev, 2001). The academic multivolume work "Flora of the Republic of Bulgaria" (Jordanov, 1964–1995) has been largely used. The species newly described by different authors have been added the way they have been published and the compilers do not express opinion on their status (except for the species described by Georgiev, D., 1997, published by the author contrary to the rules of the International Code for Botanical Nomenclature).

New plant species for the Bulgarian flora reported or confirmed recently, sometimes belonging to genera and even families new for the country, are also included in the Conspectus (ANČEV & GORANOVA, 1997; BANCHEVA & DENCHEV, 2000; BERG & AL., 1989; ČEŠMEDŽIEV, 1988; DELIPAVLOV, 1980, 1990, 1992b, 1998, 1999; DELIPAVLOV & ČEŠMEDŽIEV, 1984a, b, 1989; DELIPAVLOV & STOJCHEV, 1994; DENEVA & LJUBENOVA, 1996; DIMITROV, 1997, 1998; DIMITROV & DENCHEV, 1999;

Dimitrov & Lazarov, 2001; Dimitrov & Al., 1997, 2001; Gerasimova & Al., 1998; Gussev, 1997; Gussev & Dimitrov, 1997; Gussev & Al., 1997; Gussev, Denchev & Al., 1998; Gussev, Uzunov & Al., 1998; Kitanov & Al., 1987; Kocheva & Dimitrov, 1997; Linding & Linding, 1991; Markova & Černeva, 1984; Niketič, 2000; Pashaliev & Dimitrov, 1994; Pavlova & Kozhuharov, 1994; Pavlova & Al., 1997, 2000; Petrova, A. S., & Al., 1998; Roussakova, 1995, 1996; Siering & Henning, 1989a, b, c; Stoeva, 1991; Stojanov, S., 1998; Tan & Vladimirov, 2001; Tashev, 2002; Velchev & Al., 1989; Zielinski, 1992).

The results of the revisions of the Bulgarian representatives of genera *Avena L*. (Delipavlov, 1999) and *Crataegus L*. (cf. Zielinski & Al., 2001) have been taken into account, as well as data from works on genus *Achillea L*. section *Filipendulinae* (Nedelcheva, 1998) and genus *Centaurea L*. sections *Cyanus* and *Lepteranthus* (Bancheva, 1999).

The data, concerning the distribution of the species throughout the country have been updated with a review of the newly published articles on the Bulgarian flora (Apostolova & Denchev, 1997; Bondev & Ljubenova, 1984; Černeva, 1997; ČEŠMEDŽIEV & VODENICHAROV, 1998; ČEŠMEDŽIEV & AL., 1998; DELIPAVLOV, 1988, 1990, 1992b, 1998; Delipavlov & Češmedžiev, 1984a, b, 1989, 1997; Delipavlov & STOJCHEV, 1994; DELIPAVLOV & AL., 1984; DENCHEV & AL., 1997, 2000; DIMITROV, 1988, 1990, 1991, 1994a, b, 1995, 2002; DIMITROV & DENCHEV, 1997, 1999; Dimitrov & Georgiev, 1999; Dimitrov & Gussev, 1994; Dimitrov & Lazarov, 2001; DIMITROV & NIKOLOV, 1998; DIMITROV & PAVLOVA. 2000; DIMITROV & VUTOV, 2000; GEORGIEV, V., 1997; GUSSEV & NOVOSELSKI, 1997; GUSSEV & AL., 1997, 1998a, b; KITANOV & AL., 1987; KOCEVA & DIMITROV, 1994; MESHINEV & AL., 2000; NEDELCHEVA, 1998; Nyagolov & Al., 2001; Pashaliev & Dimitrov, 1994; Pashaliev, 1995; PAVLOVA & NEDELCHEVA, 2001; PAVLOVA & AL., 1997; PETROVA, A. S. & AL., 1998, 1999, 2001; Sopotlieva & Petrova, A. S., 2001; Stojanov & Georgiev, 2001; Tashev, 2001; Tzonev, 1997, 2000; Uzunov, 1997; Uzunov & Al., 1998; Vladimirov, 2001a, b; Vladimirov & Kozhuharov, 1999; Vutov & Dimitrov, 2000a, b; Zhelev & GOGUSHEV, 2000). The results of studies carried out in the framework of the Bulgarian-Swiss Biodiversity Conservation Programme (1994-2000) and of the revisions of the herbarium collections of Sofia University "St. Kliment Ohridski" (SO) and the Higher Agricultural Institute - Plovdiv (SOA and IAP) are also included in the Conspectus. Some previous publications, not reflected in the main literary sources, have also been used (BONDEV & AL., 1976, 1979; BROWICZ & ZIELINSKI, 1977; GANCHEV & DENCHEV., 1971; GANCHEV & KOCHEV, 1963, 1968; HINKOVA, 1960; JORDANOV & MARKOVA, 1970; JORDANOV & AL., 1965, 1968; PANOV, 1975a, b, c, 1978; Stojanov, N., 1965; Velchev & Al., 1966).

Some species have been removed from the list of the Bulgarian flora, since their publication has been based on misidentification: Achillea biebersteinii Afan. (Nedelcheva, 1998), Astragalus fraxinifolius DC. (Pavlova & Kozhuharov, 1994) and Celtis caucasica Willd. (Browicz & Zielinski, 1977). The distribution in Bulgaria of some other species is contestable, since no sample material of them is available in the Bulgarian herbaria: Adenophora liliifolia (L.) DC., Aruncus dioicus (Walter) Fernald, Dactylorhiza majalis (Reichenb.) P. F. Hunt et Summerhayes,

Globularia trichosantha Fisch. et C. A. Meyer, *Teucrium botrys* L. and others. Therefore they have not been included in the present Conspectus.

The presence of species until recently considered extinct from the Bulgarian flora has been confirmed: Aldrovanda vesiculosa L. (BAEVA, 1992), Carex rupestris Bell. ex All., Hammarbia paludosa (L.) O. Kuntze (VODENICHAROV & VASSILEV, 1999), Lathyrus pančičii (Juris.) Adam. (PETROVA, A. S., APOSTOLOVA & GEORGIEV, in prep.) and Viola pumila Chaix (ANDREEV, 1993). The presence of other species nowadays remains doubtful (VELCHEV, 1984) – Ammania verticillata (Ard.) Lam., Angelica archangelica L., Astragalus cornutus Pallas, Caldesia parnassifolia (Bassi) Parl., Hypericum setiferum Stefanov, Liparis loeselii (L.) L. C. Richard, Salix rosmarinifolia L., Tetragonolobus maritimus (L.) Roth, Theligonum cynocrambe L.; – but they are still part of the Bulgarian flora. This is valid also for Arnica montana L., identified by Dr. D. Dimitrov in the herbaria during the preparation of the Conspectus.

Some unpublished data of new or confirmed species of the Bulgarian flora have also been included in this Conspectus. Detailed information about these findings will be reported elsewhere (DIMITROV & ASSYOV, submitted; DIMITROV & SIDJIMOVA, submitted; KOSTADINOVA & DIMITROV, submitted; TZONEV & ZIELINSKI, accepted; PETROVA, A. S. & AL., ined., DIMITROV, ined.).

The known hybrid combinations in the Bulgarian flora have not been included in this publication. Comprehensive review of the hybrids of the higher Bulgarian plants has been made by ANČEV (1984).

In order to ensure the compatibility with previous publications, the phytogeographic division accepted by "Flora of the Republic of Bulgaria" (JORDANOV, 1966) has been used. The altitudes of distribution are given according to KOZHUHAROV (1992), corrected whenever the cited sources are indicating different figures for the vertical distribution, or whenever the compilers have personal observations.

The protected species are marked according to the Annex 3 of the draft Law on biodiversity, in process of adoption by the Parliament of Republic of Bulgaria.

Floristic elements

A floristic element is a group of species originating from the same floristic region, which determine their appearance of a certain geographical region. Bulgaria's geographic location is the reason for the considerable diversity of floristic elements in its flora. Many Mediterranean elements enter along the valleys of the bigger rivers in southern Bulgaria - the Struma, the Mesta, the Maritsa, the Arda - and along the southern Black Sea coast. Mediterranean oases exist even on the southern slopes of the Balkan Mountain. The flora of the Strandja Mountain is unique for Europe with its relict Euxinic elements. Some Middle Eastern elements penetrate from the southeast and Pontic elements, typical for the steppes of the northern Black Sea and the Caspian Sea coasts, enter from the northeast. Alpine - Carpathian geo-elements enter from the northwest, mainly along the Balkan Mountain chain. Scardic elements penetrate from the southwest, following the orientation of the mountain massifs of the Osogovska Mountain, Vlahina, Ograzhden, Belasitsa and Pirin. The alien plants that have found their place in the Bulgarian flora due to human intervention are also included in the current edition and are termed adventives, regardless of the way and the time they have come (see Petrova, A. & Vladimirov, 2001).

In the current Conspectus the species of the Bulgarian flora are affiliated to a certain floristic element on the basis of the classification done by Walter, with some amendments and completions.

Acknowledgements

The compilers express their gratitude to Dr. Pierre Galland and to Prof. Ilia Cheshmedjiev for their critical remarks on the whole edition, to Dr. Tenyo Meshinev, and Dr. Iva Apostolova for their kind co-operation and valuable advise during the preparation of this publication, to Rossen Tsonev for the unpublished data, and to the technical assistants Plamen Stoyanov, Vladimir Trifonov, Zvezdelina Stoyanova for their precise work. The authors owe special thanks to the Bulgarian-Swiss Biodiversity Conservation Programme and the Swiss League for Nature Protection Pro Natura for the financial support.

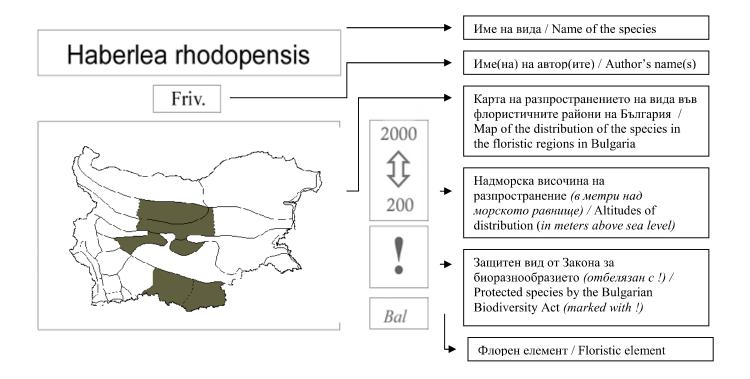
The present Conspectus may contain certain omissions and inaccuracies. The compilers would be very grateful to anyone who would help to find and eliminate them. Please send your comments, notes or new plant distribution data to the authors' emails.

Използване на Конспекта

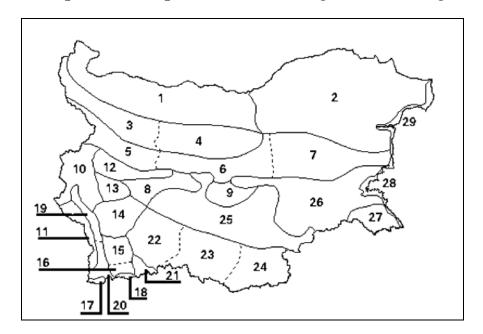
How to use the Conspectus

Този Конспект включва информация за разпространението и консервационното значение на 4102 вида висши растения, подредени по азбучен ред. Всеки вид разполага със следните полета с информация:

This Conspectus provides information on the distribution and the conservation status of 4102 species of plants, listed in alphabetical order. The following data fields are available for each species:



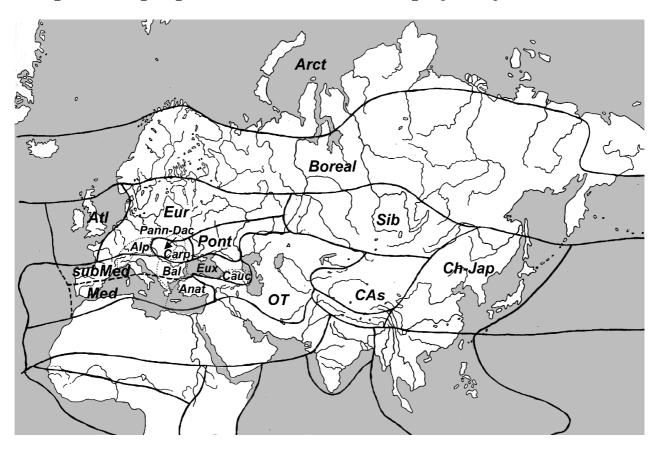
Флористични райони и подрайони / Floristic regions and sub-regions in Bulgaria



- 1. The Danubian Plain
- 2. North-Eastern Bulgaria
- 3. The Predbalkan (West)
- 4. The Predbalkan (East)
- 5. Stara Planina (the Balkan) (West)
- 6. Stara Planina (the Balkan) (Central)
- 7. Stara Planina (the Balkan) (East)
- 8. Sredna Gora (West)
- 9. Sredna Gora (East)
- 10. Znepole Region
- 11. West Frontier Mountains
- 12. Sofia Region
- 13. Vitosha Region
- 14. The Rila
- 15. The Pirin (North)
- 16. The Pirin (South)
- 17. The Belasitza
- 18. The Slavianka
- 19. The Struma Valley (North)
- 20. The Struma Valley (South)
- 21. The Mesta Valley
- 22. The Rhodopes (West)
- 23. The Rhodopes (Central)
- 24. The Rhodopes (East)
- 25. Thracian Plane
- 26. The Tundia Hilly Plane
- 27. The Strandja
- 28. The Black Sea coast (South)
- 29. The Black Sea coast (North)

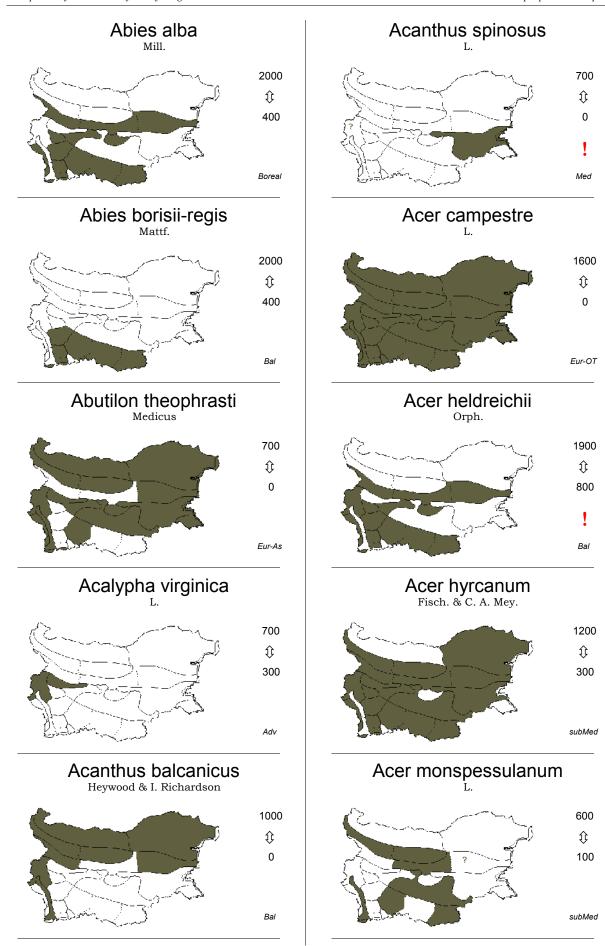
- 1. Дунавска равнина
- 2. Североизточна България
- 3. Предбалкан (западен)
- 4. Предбалкан (източен)
- 5. Стара Планина (западна)
- 6. Стара Планина (централна)
- 7. Стара планина (източна)
- 8. Средна гора (западна)
- 9. Средна гора (източна)
- 10. Знеполски район
- 11. Западни гранични планини
- 12. Софийски район
- 13. Витошки район
- 14. Рила
- 15. Пирин (северен)
- 16. Пирин (южен)
- 17. Беласица
- 18. Славянка
- 19. Долината на Струма (северна)
- 20. Долината на Струма (южна)
- 21. Долината на Места
- 22. Родопи (западни)
- 23. Родопи (средни)
- 24. Родопи (източни)
- 25. Тракийска равнина
- 26. Тунджанска равнина
- 27. Странджа
- 28. Черноморско крайбрежие (южно)
- 29. Черноморско крайбрежие (северно)

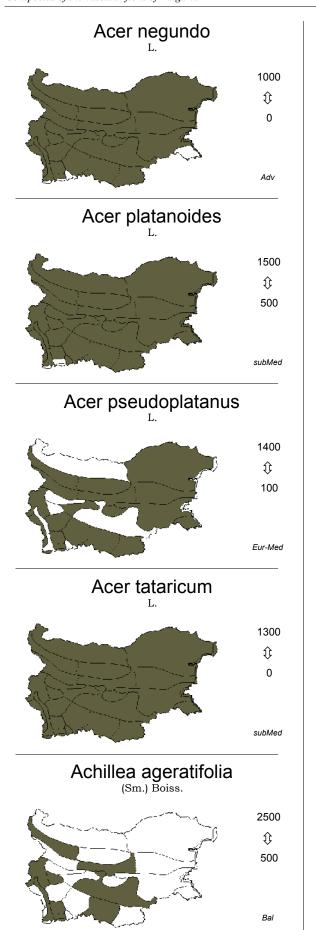
Карта на флорните елементи / Map of the floristic elements

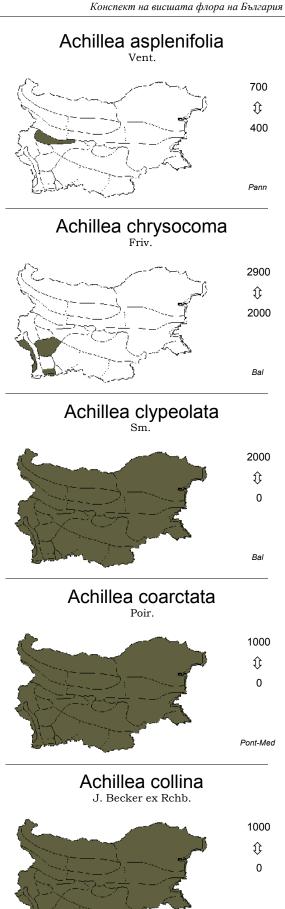


Флорни елементи / Floristic elements

Adv	адвентивен	Adventive	Eur	европейски	European
Aeg	егейски	Aegyan	Eux	евксински	Euxinian
Afr	африкански	African	Hybr	хибриден	Hybridogenous
Alp	алпийски	Alpine	Jap	японски	Japanese
Anat	анатолийски	Anatolian	Kos	космополитен	Cosmopolitan
Ap	апенински	Apenninian	Med	средиземноморски	Mediterranean
Am	американски	American	ОТ	ориентало-турански	Oriental-Turanian
Arct	арктически	Arctic	Pann	панонски	Pannonian
As	азиатски	Asiatic	Pont	понтийски	Pontic
Atl	атлантически	Atlantic	Sib	сибирски	Siberian
Bal	балкански	Balkan	<u>Prefixes:</u>		
Boreal	бореален	Boreal	sub	суб-	sub
Bul	български	Bulgarian	S	южно-	South
Carp	карпатски	Carpathian	Ε	източно-	East
Cauc	кавказки	Caucasus	W	западно-	West
Ch	китайски	Chinese	N	северно-	North
Dac	дакийски	Dacian	С	централно-	central

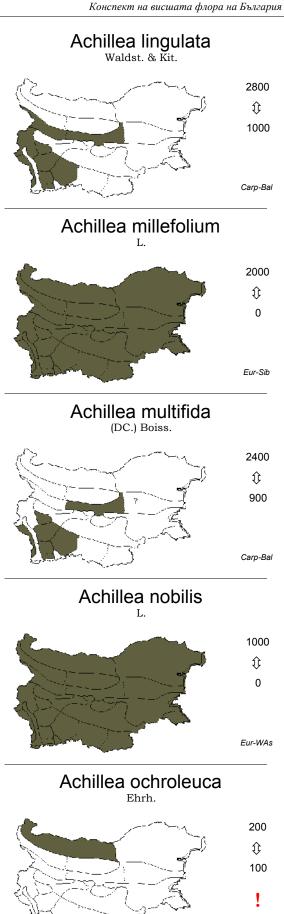






Eur-subMed

Achillea crithmifolia Waldst. & Kit. 1500 **Û** Pann-Bal Achillea distans Waldst. & Kit. ex Willd. 2000 **Û** 0 Alp-Carp-Bal Achillea grandifolia 2000 $\hat{\mathbf{t}}$ 500 Bal-Anat Achillea kotschyi 1500 $\hat{\mathbf{U}}$ 1300 Bal-Anat Achillea leptophylla M. Bieb. 200 **Û** 0 Pont-Bal



Pann

Achillea pannonica



Achillea pseudopectinata Janka



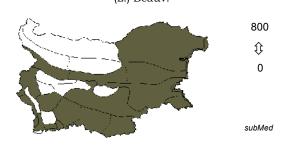
Achillea setacea Waldst. & Kit.



Achillea thracica Velen.



Achnatherum bromoides (L.) Beauv.



Achnatherum calamagrostis (L.) P. Beauv.

subMed

800

Û

Acinos alpinus (L.) Moench

2700 \$\frac{1}{2}\$
500

Acinos arvensis (Lam.) Dandy

Eur-Med

Alp-Carp

Acinos rotundifolius

Pers.

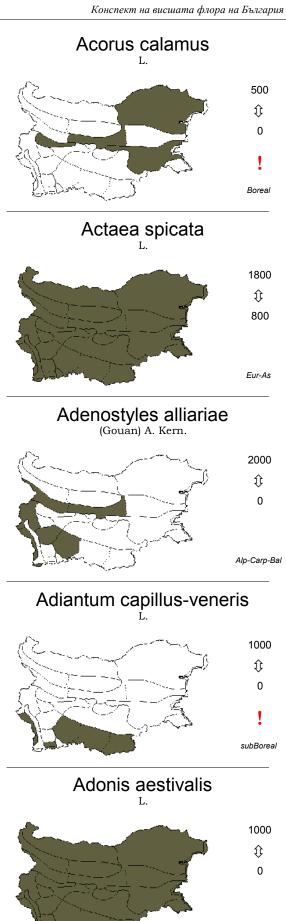


Acinos suaveolens

(Sm.) Don

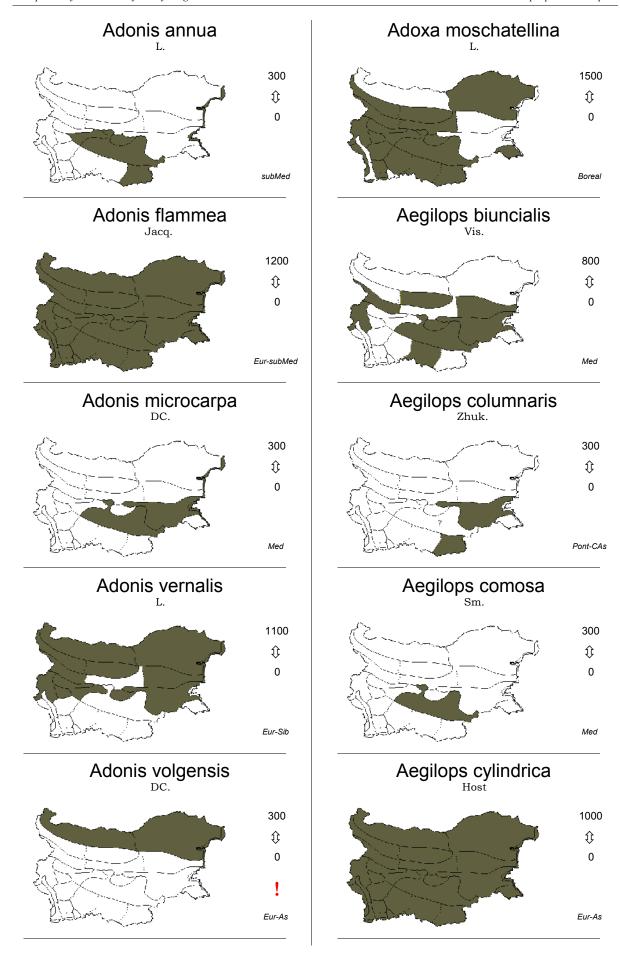


Aconitum anthora **Û** subMed Aconitum burnatii 2500 \hat{v} 1500 SEur Aconitum lycoctonum 2400 $\hat{\mathbf{t}}$ 650 subMed Aconitum variegatum 2350 \hat{v} 1200 subMed Acorellus pannonicus (Jacq.) Palla 200 **Û** 0

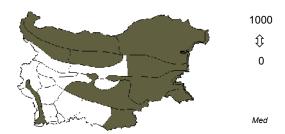


Eur-subMed

Boreal



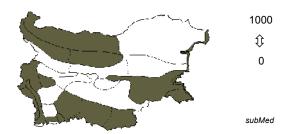
Aegilops geniculata



Aegilops markgrafii (Greuter) Hammer



$\underset{\text{Req. ex Bertol.}}{\text{Aegilops neglecta}}$



Aegilops speltoides



Aegilops triuncialis



Aegopodium podagraria



Aeluropus littoralis (Gouan) Parl.



Aesculus hippocastanum



Aethionema arabicum

(L.) Andrz. ex O.E.Schulz



Aethionema rhodopaeum D. Pavlova

500 Û 100

Aethionema saxatile



Aethusa cynapium $_{\scriptscriptstyle \rm L.}$



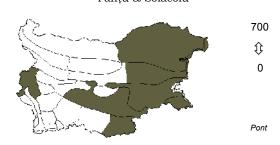
Agrimonia eupatoria



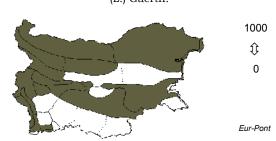
Agrimonia procera



Agropyron brandzae



Agropyron cristatum (L.) Gaertn.



Agrostemma githago



Agrostis canina

1500 ①

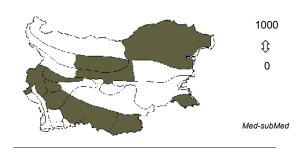
0

Eur-Sib

Agrostis capillaris



Agrostis castellana Boiss. & Reut.



200 ��

0

subMed

\$00 \$

0

Med

2300

 $\hat{\mathbf{t}}$

0

Pont-Med

1300 ‡

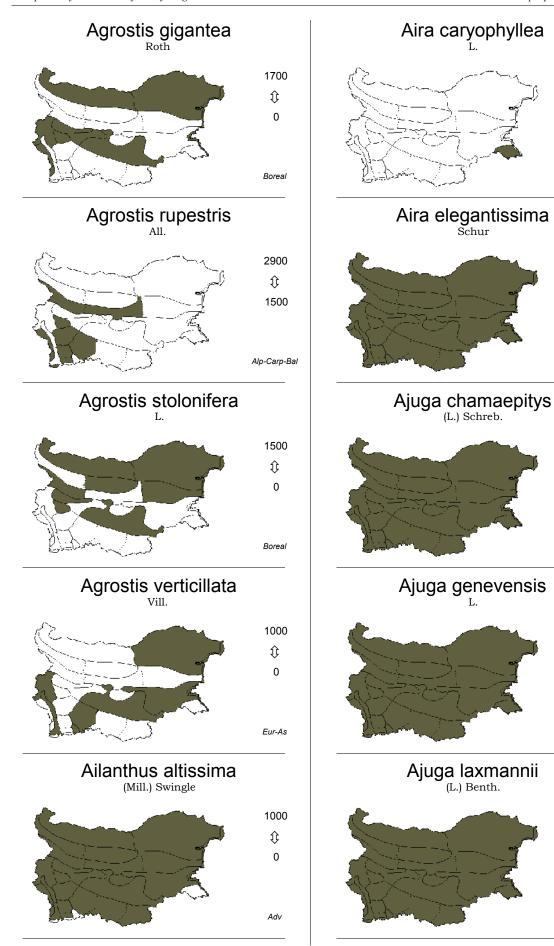
0

SPont

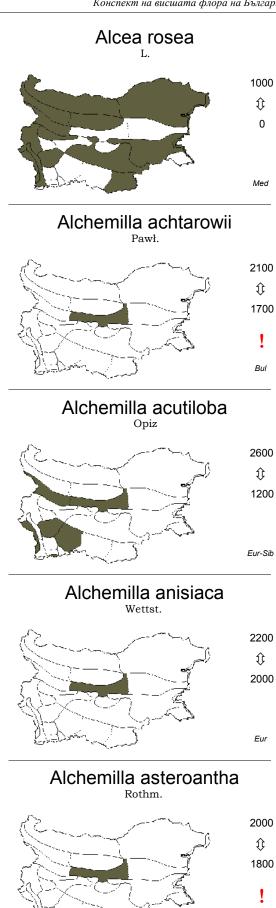
1800 ‡

0

SSib



Ajuga pyramidalis 2400 ${\bf \hat{t}}$ 1200 Ajuga reptans 2000 **Û** 0 Eur-Med Ajuga salicifolia 800 $\hat{\mathbf{t}}$ 0 subMed Alcea heldreichii (Boiss.) Boiss. 1100 ${\bf \hat{t}}$ 150 Pont-Med Alcea pallida (Waldst. & Kit. ex Willd.) Waldst. et Kit. 1000 **Û** 0 subMed

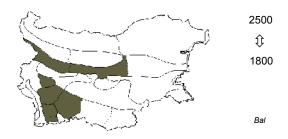


Bul

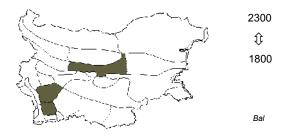
Alchemilla bandericensis



Alchemilla bulgarica



Alchemilla catachnoa



Alchemilla cinerea

2500 tì 1800

Alchemilla connivens



Alchemilla crinita

2200 Û 1400

Eur

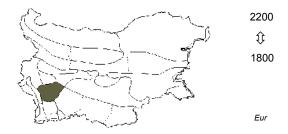
Alchemilla damianicensis



Alchemilla erythropoda

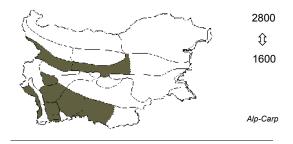
Alchemilla fissa

Günter & Schummel



Alchemilla flabellata

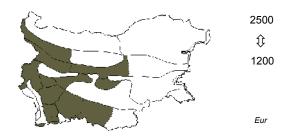
Buser



Alchemilla glabra Neygenf.



Alchemilla glaucescens



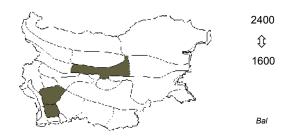
Alchemilla gorcensis



Alchemilla gracilis



Alchemilla gracillima



Alchemilla grossidens

2100 $\hat{\mathbf{t}}$ 1900

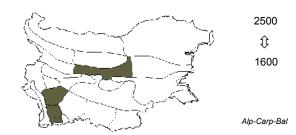
Eur

Alchemilla heterophylla Rothm.



Alchemilla incisa

Buser



Alchemilla indivisa

(Buser) Rothm.



Alchemilla jumrukczalica

1800 ${\bf \hat{v}}$ 1700 ! Bul

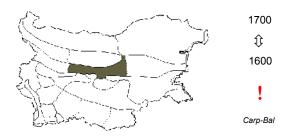
Alchemilla lunaria

Fróhner



Alchemilla mollis

(Buser) Rothm.



Alchemilla monticola



Alchemilla obtusa

Buser



Alchemilla pawlowskii

2500 $\hat{\mathbf{U}}$ 2500 Bul

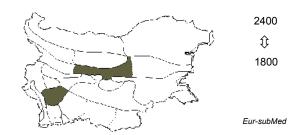
Alchemilla pirinica



Alchemilla plicatula



Alchemilla pyrenaica



Alchemilla reniformis

Buser



Alchemilla sirjaevi



Alchemilla straminea



Alchemilla subcrenata

Buser



Alchemilla viridiflora

Rothm.



Alchemilla xanthochlora

Rothm.



Aldrovanda vesiculosa



Alisma gramineum _{Lej.}



Alisma lanceolatum



Alisma plantago-aquatica



Alkanna graeca Boiss. & Spruner



Alkanna jordanovii Kožuharov



Alkanna primuliflora Griseb.



Alkanna stojanovii



Alkanna stribrnyi



Alkanna tinctoria (L.) Tausch



Alliaria petiolata (M. Bieb.) Cavara & Grande



Allium albidum

Fisch.ex M. Bieb.



Allium amethystinum



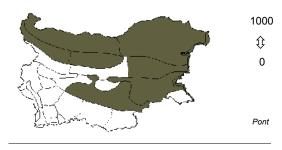
Allium ampeloprasum



Allium angulosum



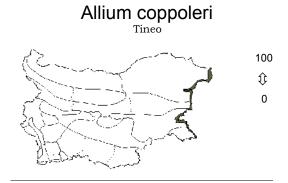
Allium atropurpureum Waldst. & Kit.

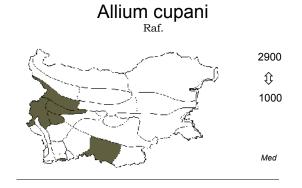


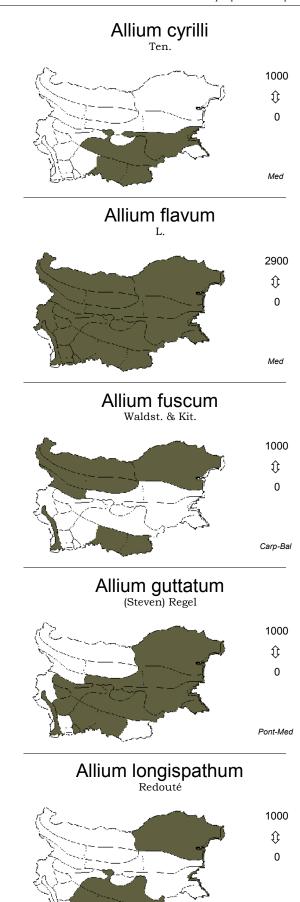
Conspectus of the vascular flora of Bulgaria Allium atroviolaceum 1000 **Û** Allium carinatum 2900 ${\bf \hat{U}}$ 0



Pont-Med







Allium margaritaceum _{Sm.}



Allium melanantherum Pančić



Allium montanum F. W. Schmidt



Allium moschatum



Allium nanum



Allium nigrum



Allium oleraceum

2500 Û
0

Allium paczoskianum _{Tuzson}

2000 Û
0

Allium pallens

EsubMed



Allium paniculatum

Allium phthioticum Boiss. & Heldr.

2000 \hat{v} 1000

Allium rhodopaeum Velen.



Allium rotundum



Allium rumelicum M. Koçyiğit & N. Özhatay



Allium saxatile M. Bieb.



Allium schoenoprasum



Allium scorodoprasum

1000 ${\bf \hat{t}}$ 0 Eur-Med

Allium sphaerocephalon

1000 Û 0 Med

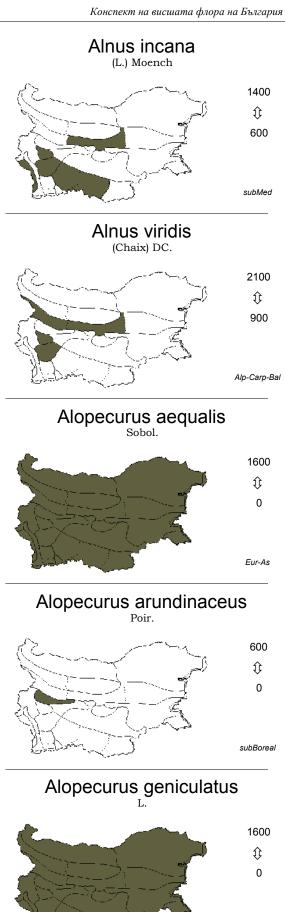
Allium tenuiflorum Ten.

1000 ${\bf \hat{t}}$ 0 Med

Allium thracicum Halácsy & Georgieff

2900 Û 2000 Bul

Allium ursinum 2000 ${\bf \hat{t}}$ 300 Allium victoriale 2900 \hat{v} 2000 Boreal Allium vineale $_{\scriptscriptstyle \rm L.}$ 1000 $\hat{\mathbf{t}}$ 0 Eur-NAm Allium webbii Clementi 2000 **Û** 0 Alnus glutinosa 1000 ${\bf \hat{v}}$ 0 Med-CAs



Eur-As

Alopecurus gerardii



Alopecurus myosuroides Huds.



Alopecurus pratensis



Alopecurus rendlei



Alopecurus riloensis (Hack.) Pawł.

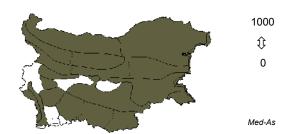


Alopecurus thracicus

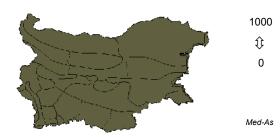
Penev & Kožuharov



Althaea canabina



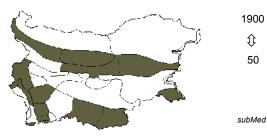
Althaea hirsuta



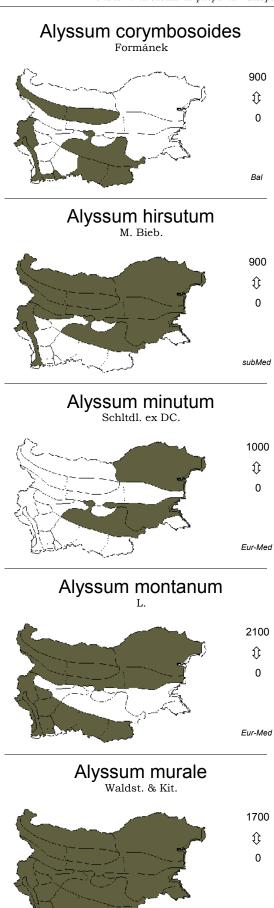
Althaea officinalis



Alyssoides utriculata (L.) Moench



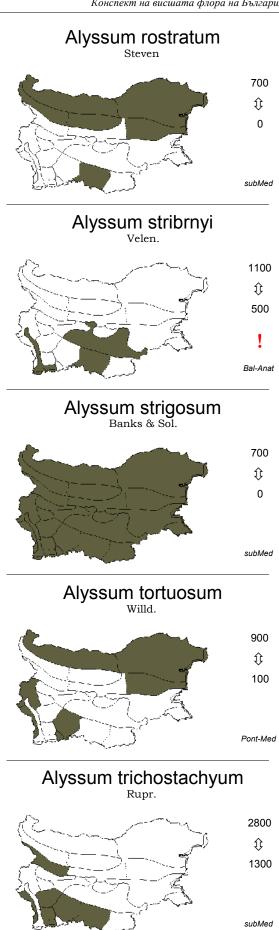
Alyssum alyssoides $_{\scriptscriptstyle (L.)\ L.}$ 1100 **Û** Eur-Med Alyssum bertolonii 900 **Û** 0 Med Alyssum borzaeanum Nyár. 400 Û 0 Pont-Med Alyssum caliacrae Nyár. 500 \hat{v} 0 Pont Alyssum campestre 1000 **Û** 0



Eur-subMed

Eur-As

Alyssum obtusifolium Steven ex DC. 700 \hat{v} Eur-Sib Alyssum orbelicum Ančev & Uzunov 2700 \hat{v} 2000 Bul Alyssum pirinicum (Stoj. & Acht.) Ančev 2800 $\hat{\mathbf{t}}$ 2200 Bul $\underset{\mathrm{Velen.}}{\text{Alyssum pulvinare}}$ 900 \hat{v} 0 Bal-Dac Alyssum reiseri Velen. 1200 $\hat{\mathbf{U}}$ 500



subMed

Alyssum turkestanicum

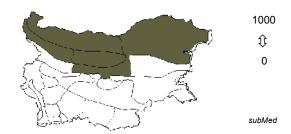
Regel & Schmalh.



Alyssum umbellatum Desv.



Alyssum wierzbickii



Amaranthus albus

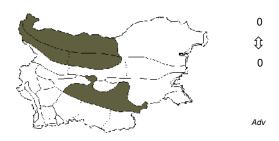


Amaranthus blitoides Watson

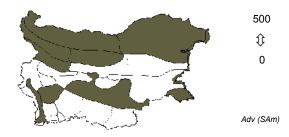


Amaranthus commutatus

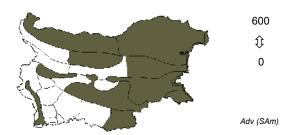
A. Kern.



Amaranthus crispus (Lesp. & Thévenau) N. Terracc.



Amaranthus deflexus



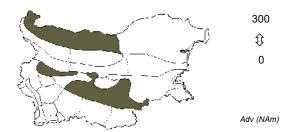
Amaranthus graecizans



Amaranthus hybridus



Amaranthus hypochondriacus



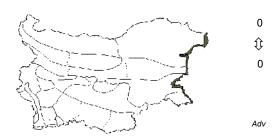
Amaranthus lividus



Amaranthus retroflexus



Amaranthus scleropoides Uline & Bray



Amaranthus spinosus



Ambrosia artemisiifolia

Amelanchier ovalis



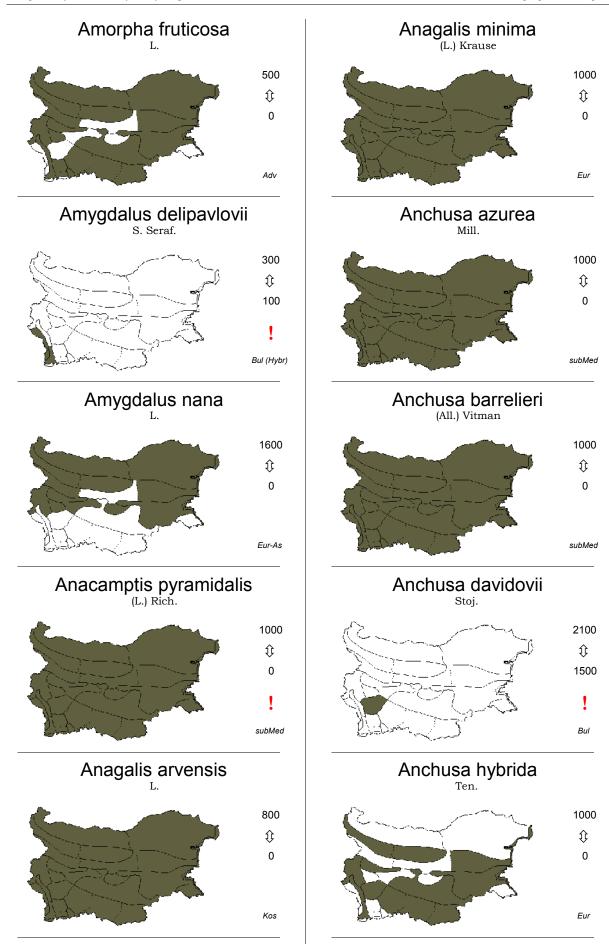
Ammannia auriculata



Ammannia verticillata (Ard.) Lam.

Ammophila arenaria

0 ↑ 0 Eur-Med



Anchusa leptophylla Roem. & Schult.



Anchusa macedonica Degen & Dörfl.



Anchusa ochroleuca M. Bieb.



Anchusa officinalis



Anchusa procera Besser

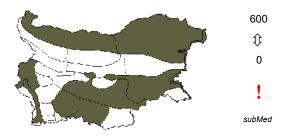


Anchusa spruneri

Boiss.

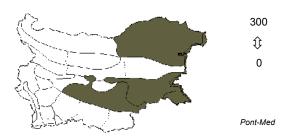


Anchusa stylosa



Anchusa thessala

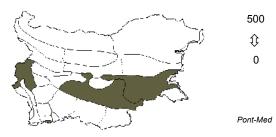
Boiss. & Spruner



Anchusa velenovskyi (Guşul.) Stoj.



Andrachne telephioides



Androsace elongata



Androsace hedraeantha Griseb.



Androsace maxima



Androsace obtusifolia



Androsace villosa



Andrzeiowskia cardamine



Anemone apennina

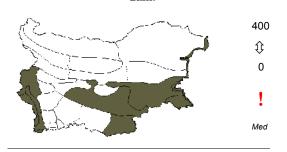
700 ⊕
100

Anemone narcissiflora

2750 \$\partial 1800

Anemone nemorosa

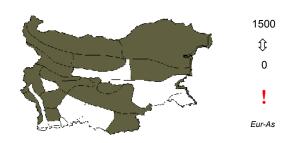
Anemone pavonina



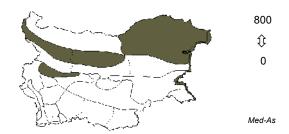
Anemone ranunculoides



Anemone sylvestris $_{\scriptscriptstyle \rm L.}$



Anethum graveolens



Angelica archangelica



Angelica pancicii



Angelica sylvestris



Antennaria dioica



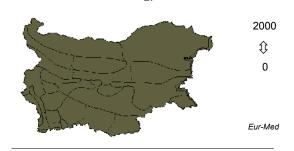
Anthemis altissima



Anthemis argyrophylla (Halácsy & Georgiev) Velen.

Bul

Anthemis arvensis



Anthemis auriculata



Anthemis austriaca



Anthemis carpatica Willd.



Anthemis cotula



Anthemis cretica



Anthemis gaudium-solis $_{\rm Velen.}$



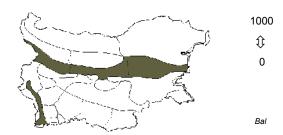
Anthemis jordanovii Stoj. & Acht.

500 \$\psi\$
500

Anthemis macedonica

Bul

Boiss.



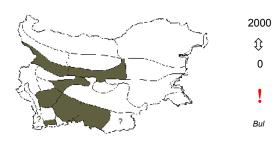
Anthemis macrantha

Heuff.



Anthemis orbelica

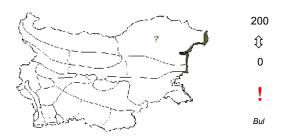
Pančić



Anthemis parnassica (Boiss. & Heldr.) Fernan.



Anthemis regis-borisii Stoj. & Acht.



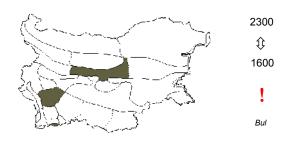
Anthemis rumelica (Velen.) Stoj. & Acht.



Anthemis ruthenica M. Bieb.



Anthemis sancti-johannis



Anthemis strybrnyi Velen.



Anthemis tenuiloba (DC.) R. Fern.

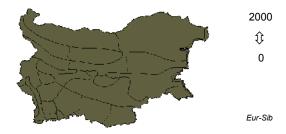


Anthemis thracica

Velen.



Anthemis tinctoria



Anthemis triumfetii

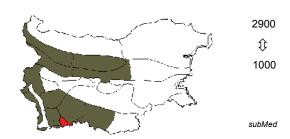
(L.) DC.



Anthemis virescens



Anthericum liliago



Anthericum ramosum



Anthoxanthum aristatum Boiss.



Anthoxanthum odoratum



Anthriscus caucalis

M. Bieb.

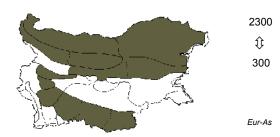


Anthriscus cereifolium (L.) Hoffm.



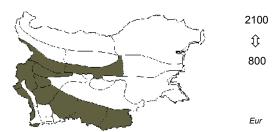
Anthriscus nemorosa

(M. Bieb.) Spreng.



Anthriscus nitida

(Wahlenb.) Garcke



Anthriscus sylvestris



1200

 ${\bf \hat{t}}$

0

1000

 ${\bf \hat{t}}$

0

Eur

1200

 $\hat{\mathbf{t}}$

500

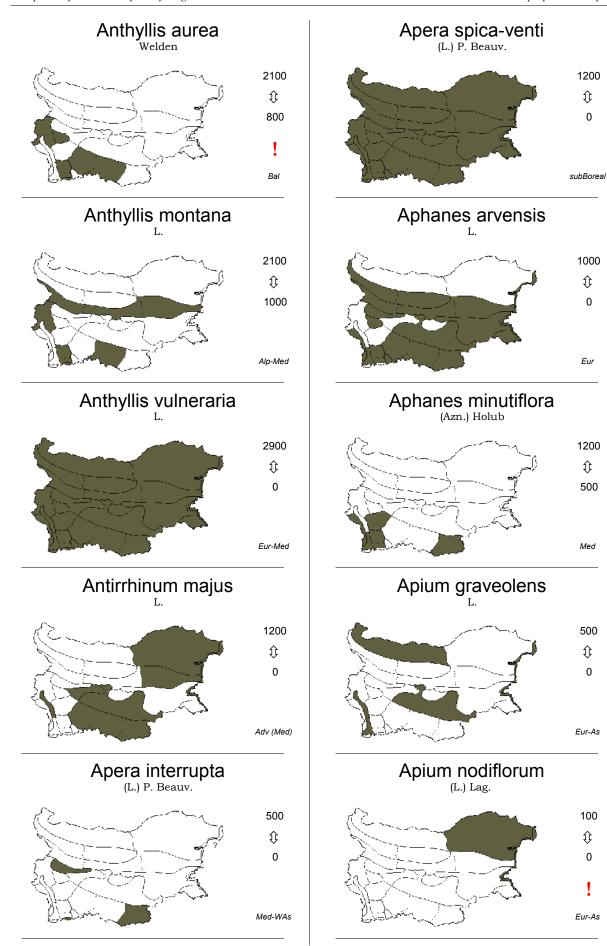
Med

500 ${\bf \hat{v}}$

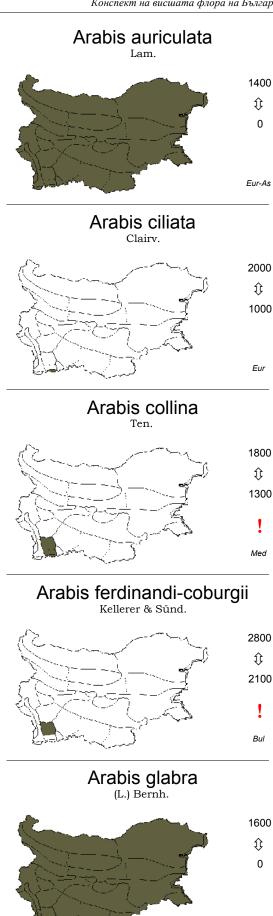
0

100 Û

0

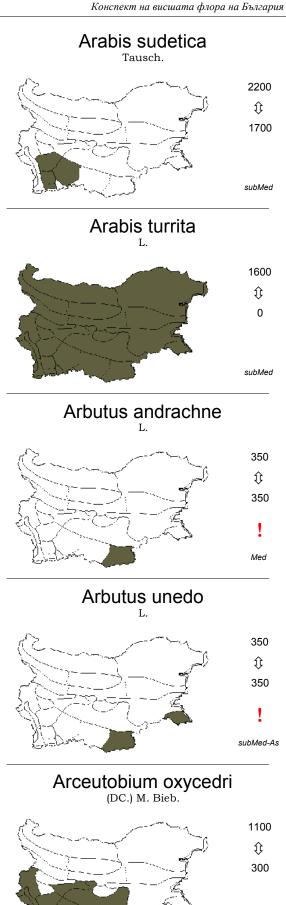


Apium repens (Jacq.) Lag. **Û** Eur Aquilegia aurea 2300 ${\bf \hat{t}}$ 1800 Bal Aquilegia nigricans Baumg. 2000 $\hat{\mathbf{t}}$ 1000 Alp-Carp-Bal Arabidopsis thaliana (L.) Heynh. 1500 **Û** 0 subBoreal Arabis alpina 2900 $\hat{\mathbf{U}}$ 1000 Arct-Alp



Boreal

Arabis hirsuta (L.) Scop. 1200 \hat{v} Arabis hornungiana 1000 **Û** 0 subMed Arabis nova 1100 Û 0 subMed Arabis procurrens Waldst. & Kit. 1500 ${\bf \hat{t}}$ 500 Eur Arabis sagittata (Bertol.) DC. 1200 ${\bf \hat{v}}$ 0



subMed-As

Eur-Med

1600

Û

subMed

2900 ‡

1500

Alp-Carp-Bal

2600 ①

2400

Alp

2100 ‡

1900

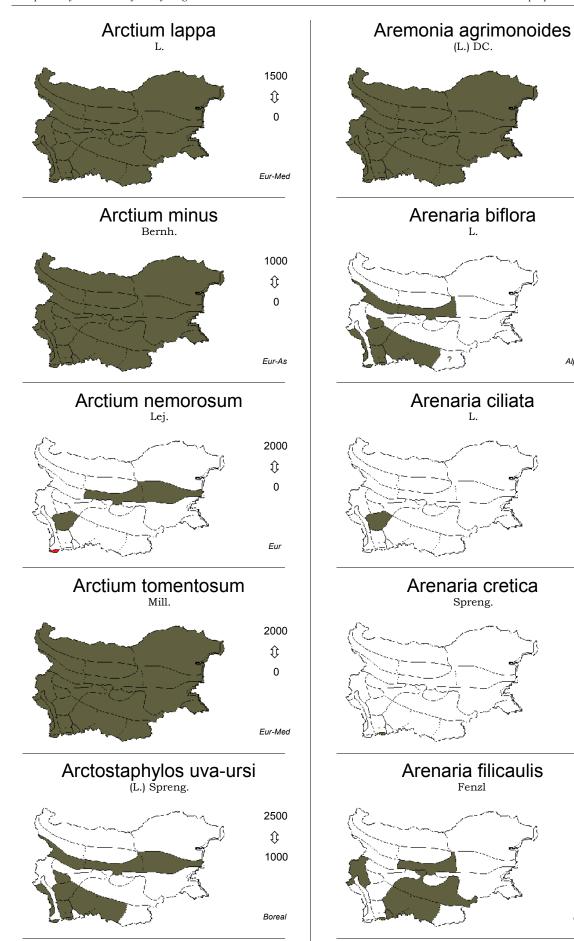
Med

1000

Û

0

Bal-Anat



Arenaria gypsophylloides



Arenaria leptoclados (Rchb.) Guss.



Arenaria pirinica



Arenaria procera Spreng.



Arenaria rhodopaea Delip.



Arenaria rigida



Arenaria rotundifolia

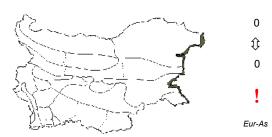
M. Bieb.



Arenaria serpyllifolia



Argusia sibirica



Aristolochia clematitis



Aristolochia pallida Willd.



Aristolochia rotunda



Armeria alpina



Armeria rumelica Boiss.



Armoracia macrocarpa (Waldst. & Kit.) Kit. ex Baumg.



Armoracia rusticana

(Lam.) P. Gaertn.



Arnica montana



Arrhenatherum elatius

(L.) P. Beauv. ex J. & C. Presl

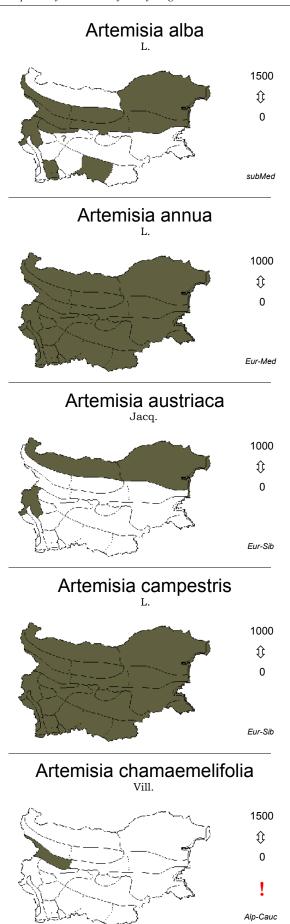


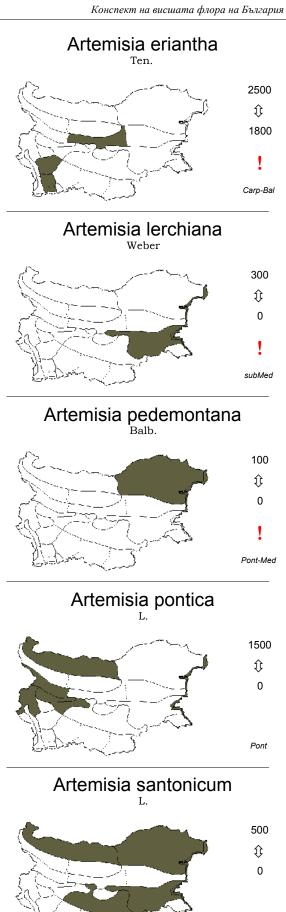
Arrhenatherum palaestinum Boiss.



Artemisia absinthium

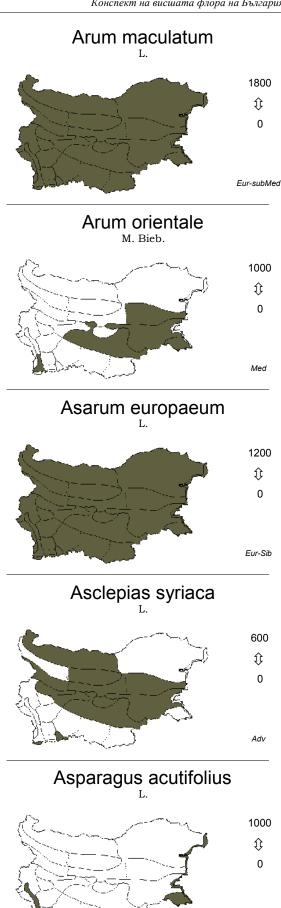






Eur-Med

Artemisia scoparia Waldst. & Kit. 1000 **Û** Artemisia vulgaris 1000 **Û** 0 subBoreal Arum alpinum Schott & Kotschy 1000 $\hat{\mathbf{t}}$ 500 Eur Arum elongatum Steven 1000 ${\bf \hat{U}}$ 0 Pont-OT Arum italicum 1000 ${\bf \hat{v}}$ 0 Med



Med

Asparagus aphyllus



Asparagus brachyphyllus _{Turcz.}



Asparagus maritimus $_{(L.)~Mill.}$



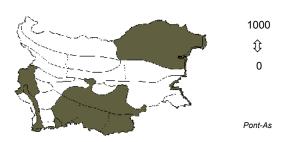
Asparagus officinalis



Asparagus tenuifolius



Asparagus verticillatus



Asperugo procumbens



Asperula aristata



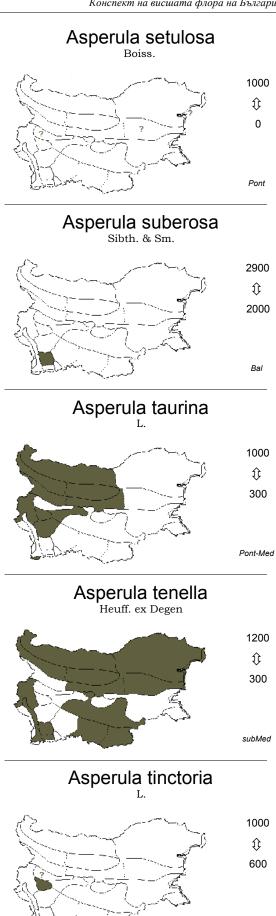
Asperula arvensis

1000 ♣
0

Eur-Med

Asperula capitata Kit. ex Schult.

Asperula cretacea Willd. 350 ${\bf \hat{U}}$ 200 Asperula cynanchica 2500 **Û** 0 Eur-Med Asperula involucrata Wahlenb. 100 $\hat{\mathbf{t}}$ 0 Bal-Anat Asperula purpurea (L.) Ehrend. 1500 ${\bf \hat{t}}$ 300 subMed Asperula rumelica Boiss. 800 ${\bf \hat{v}}$ 0



Eur-Sib

subMed

Asphodeline liburnica (Scop.) Rchb.

1000 \hat{v}

Pont-Med

Pont-Med

Asphodeline lutea (L.) Rchb.

1200 **Û** 0

Asphodeline taurica (Pall. ex M. Bieb.) Kunth



Asphodelus albus $_{\scriptscriptstyle Mill.}$

1600 $\hat{\mathbf{U}}$ 800 subMed

Asplenium adianthum-nigrum



Asplenium cuneifolium



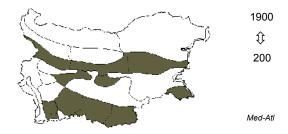
Asplenium fissum Kit. ex Willd.



Asplenium lepidum _{C. Presl}



Asplenium onopteris

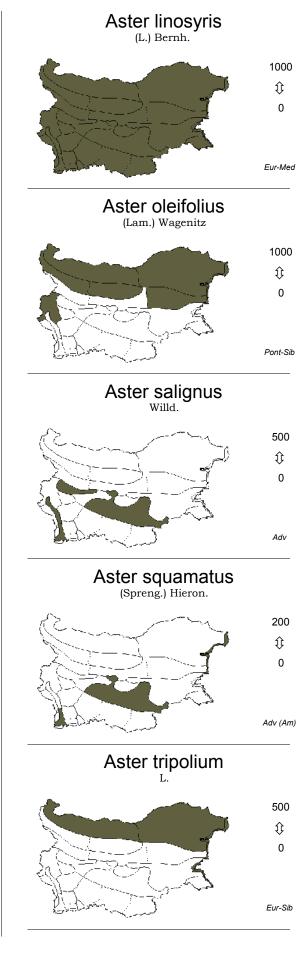


Asplenium ruta-muraria



Conspectus of the vascular flora of Bulgaria Asplenium septentrionale $_{(L.)\ Hoffm.}$ 2000 ${\bf \hat{v}}$ 100 Asplenium trichomanes 1700 ${\bf \hat{U}}$ 0 Kos $\underset{\text{Huds.}}{\text{Asplenium viride}}$ 2300 $\hat{\mathbf{t}}$ 800 Boreal Aster alpinus 2900 \hat{v} 1300

Aster amellus



Arct-Alp

1000

Û 0

Eur-Med

Asteriscus aquaticus (L.) Less.



Asterolinon linum-stellatum (L.) Duby



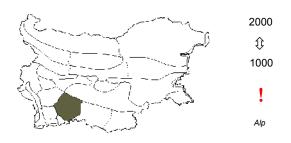
Astracantha aitosensis (Ivan.) Podl.



Astracantha thracica (Griseb.) Podl.



Astragalus alopecurus



Astragalus angustifolius



Astragalus asper



Astragalus australis (L.) Lam.



Astragalus austriacus

Astragalus cicer

Astragalus contortuplicatus



Astragalus corniculatus M. Bieb.



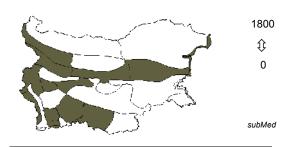
Astragalus cornutus



Astragalus dasyanthus



Astragalus depressus



Astragalus excapus



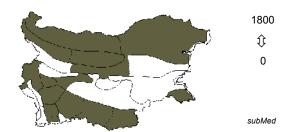
Astragalus gladiatus



Astragalus glaucus M. Bieb.



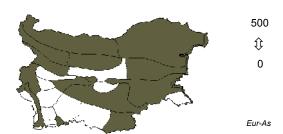
Astragalus glycyphylloides



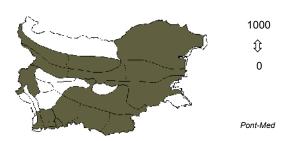
Astragalus glycyphyllos



Astragalus hamosus



Astragalus monspessulanus



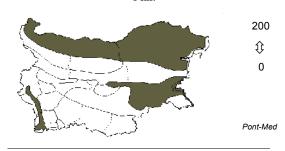
Astragalus onobrychis



Astragalus physocalyx Fisch.



Astragalus ponticus

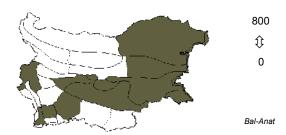


Astragalus pubiflorus



Astragalus sesameus

Astragalus spruneri Boiss.

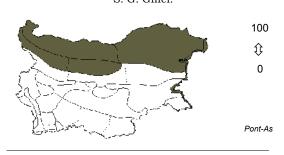


Astragalus suberosus Banks & Sol.

500 Û
0

Bal-Anat

Astragalus varius S. G. Gmel.



Astragalus vesicarius



Astragalus wilmottianus Stoj.



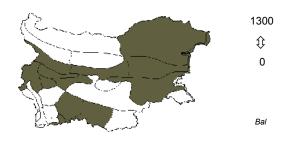
Astrantia major



Astrodaucus littoralis (M. Bieb.) Drude



Asyneuma anthericoides (Janka) Bornm.



Asyneuma canescens

(Waldst. & Kit.) Griseb. et Schenk



Asyneuma limonifolium (L.) Janch.

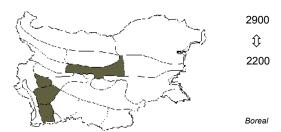


Asyneuma pichleri (Vis.) D. Lakušić & F. Conti

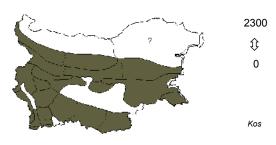


Athyrium distentifolium

Tausch ex Opiz



Athyrium filix-femina



Atriplex oblongifolia Atriplex hastata 800 500 **Û** ${\bf \hat{v}}$ 0 Eur-As Atriplex patula Atriplex heterosperma 0 600 **Û** ${\bf \hat{v}}$ 0 0 Adv Boreal Atriplex rosea Atriplex hortensis 800 500 \hat{v} $\hat{\mathbf{t}}$ 0 0 Adv Eur-As Atriplex tatarica Atriplex micrantha Ledeb. 800 0 Û ${\bf \hat{v}}$ 0 0 Pont Eur-As Atriplex nitens Schkuhr Atropa bella-donna 1000 1800 Û ${\bf \hat{v}}$ 0 450 Eur-As Eur

Aubrieta columnae 1800 $\hat{\mathbf{t}}$ 1100 subMed Aubrieta gracilis Spruner ex Boiss. 2400 \hat{v} 1800 Bal Aurinia saxatilis (L.) Desv. 1700 $\hat{\mathbf{t}}$ 0 Eur-Med Avena barbata Pott ex Link 500 ${\bf \hat{t}}$ 0 Med Avena byzantina 700 \hat{v} 0 Adv (EMed)



Adv (Eur-As)

Avena wiestii Steud. 800 **Û** Avenula compressa (Heuffel) Sauer & Chmelitschek 1000 ${\bf \hat{t}}$ 0 Bal-Dac Avenula planiculmis (Schrad.) Sauer & Chmelitschek 2000 $\hat{\mathbf{t}}$ 1500 Bal-Anat Avenula pubescens (Huds.) Dumort. 1500 \hat{v} 0 SSib Avenula versicolor (Vill.) Lainz 2400 $\hat{\mathbf{U}}$ 1700



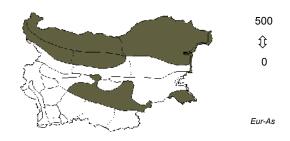
Ap-Bal

Alp-Carp-Bal

Barbarea longirostris _{Velen.}



Barbarea stricta Andrz.



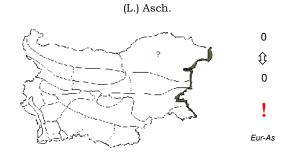
Barbarea vulgaris



Bartsia alpina



Bassia hirsuta



Beckmannia eruciformis



Bellardia trixago



Bellardiochloa violacea

(Bellardi) Chiov.



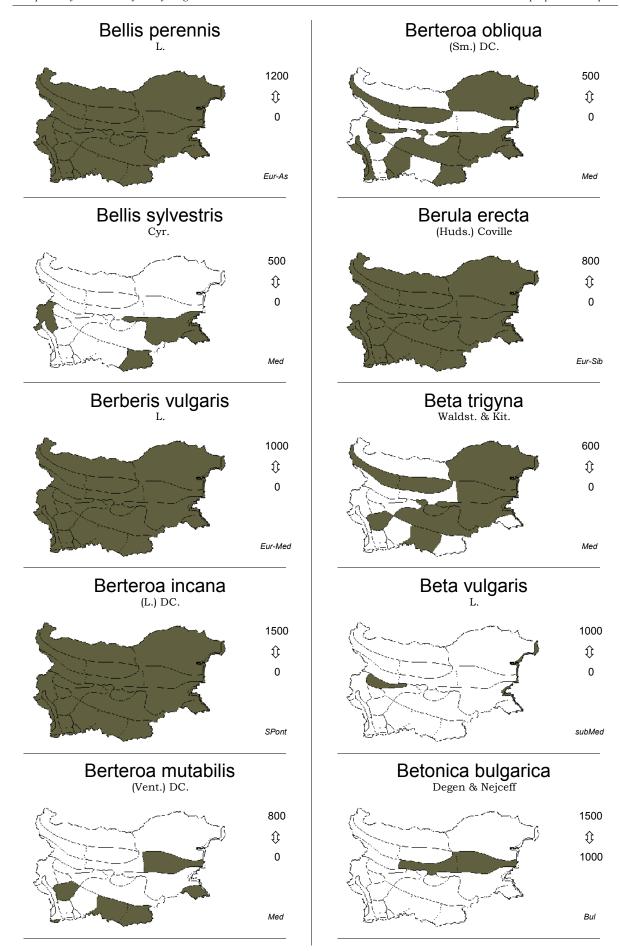
Bellevalia sarmatica

(Pall. ex Georgi) Woronov



Bellis annua





Betonica haussknechtii

Uechtr. ex Hausskn.



Betonica officinalis



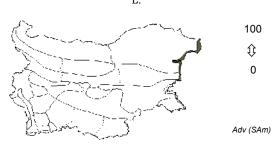
Betonica scardica Griseb.



Betula pendula



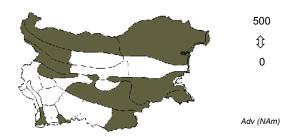
Bidens bipinnatus



Bidens cernua



Bidens frondosus $_{\rm L.}$



Bidens tripartita



Bidens vulgatus



Bifora radians

M. Bieb.



Bifora testiculata



Bilderdykia convolvulus (L.) Dumort.



Bilderdykia dumetorum (L.) Dumort.



Biserrula pelecinus $_{\rm L.}$



Bistorta major



Bistorta vivipara

(L.) Gray 2750 1000

Bituminaria bituminosa (L.) Stirt.

Blackstonia perfoliata (L.) Huds.



$\underset{(L.)\; Roth}{\mathsf{Rechnum}} \; \mathsf{spicant}$

Blysmus compressus (L.) Panz. ex Link



Bolboschoenus laticarpus

Marhold, Hroudová, Doucháček & Zákravský



Bolboschoenus maritimus (L.) Pall.



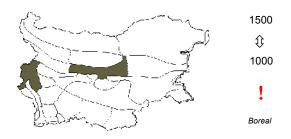
Bombycilaena erecta (L.) Smoljan.



Botrychium Iunaria

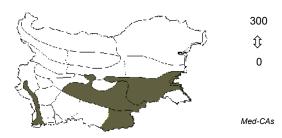


Botrychium matricariifolium A. Braun ex Koch



Brachiaria eruciformis

(Sm.) Griseb.



$\underset{\mathrm{Murb.}}{\mathsf{Brachypodium}} \ \mathsf{glaucovirens}$



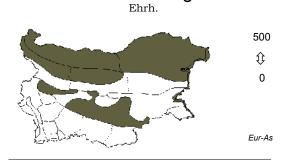
Brachypodium pinnatum (L.) P. Beauv.

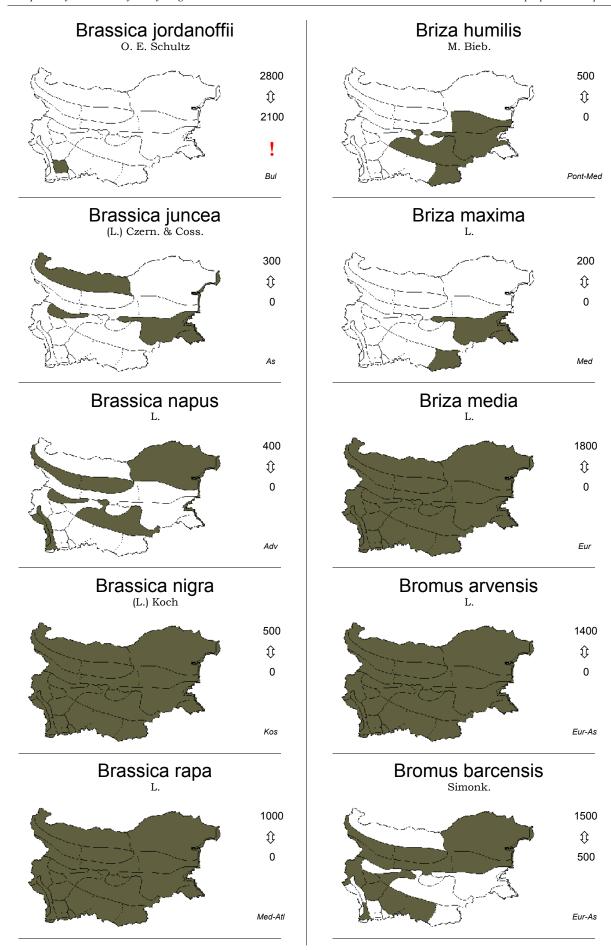


Brachypodium sylvaticum (Huds.) P. Beauv.



Brassica elongata





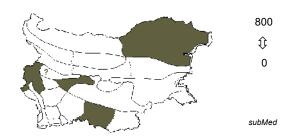
Bromus benekenii (Lange) Trimen



Bromus commutatus Schrad.



Bromus erectus



Bromus inermis Leyss.



Bromus intermedius



Bromus japonicus



Bromus lacmonicus



Bromus lanceolatus



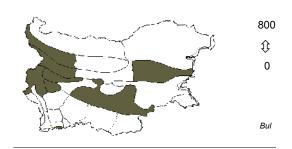
Bromus madritensis

500 ①

O

Med

Bromus moesiacus Velen.



Bromus mollis



Bromus orbelicus (Velen.) Petrova, Kožucharov & Ehrend.



Bromus parilicus Petrova, Kožucharov & Ehrend.



Bromus parvispiculatus H. Scholz



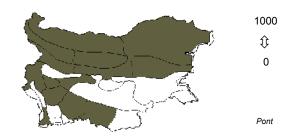
Bromus racemosus



Bromus ramosus



Bromus riparius



Bromus scoparius $_{\scriptscriptstyle L.}$



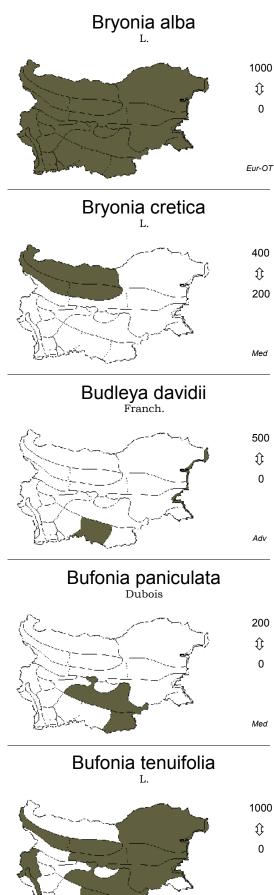
Bromus secalinus $_{\scriptscriptstyle L.}$



Bromus squarrosus



Bromus sterilis 600 **Û** Bromus tectorum 1000 ${\bf \hat{U}}$ 0 Boreal Bromus transsilvanicus Steud. 1500 $\hat{\mathbf{t}}$ 0 Carp-Bal Broussonetia papyrifera 50 **Û** 0 Adv (EAs) Bruckenthalia spiculifolia (Salisb.) Rchb. 2250 $\hat{\mathbf{U}}$ 1000 subMed



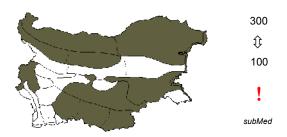
Eur

Buglossoides arvensis

(L.) I. M. Johnst.



Buglossoides glandulosa (Velen.) R. Fern.



Buglossoides incrassata

(Guss.) I. M. Johnst.



Buglossoides purpurocaerulea (L.) I. M. Johnst.



Buglossoides sibthorpiana (Griseb.) Czerep.



Buglossoides tenuiflora

(L. f.) I. M. Johnst.



Bunias erucago

L



Bunias orientalis

L.



Bunium ferulaceum

Sm



Bupleurum aequiradiatum

(H. Wolff) Snogerup & B. Snogerup



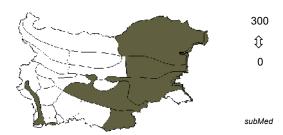
Bupleurum affine



$\underset{Friv.}{\text{Bupleurum apiculatum}}$



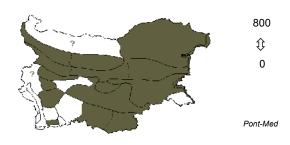
Bupleurum asperuloides Heldr. ex Boiss.



Bupleurum baldense Turra



Bupleurum commutatum Boiss. & Balansa



Bupleurum euboeum

Beauverd & Topali



Bupleurum falcatum



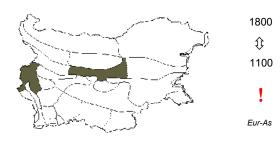
Bupleurum flavum Forssk.



Bupleurum gerardi



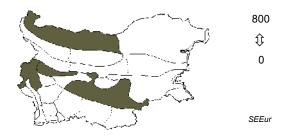
Bupleurum longifolium



Bupleurum odontites



Bupleurum pachnospermum Pančić



Bupleurum praealtum



Bupleurum ranunculoides $_{\scriptscriptstyle L.}$



Bupleurum rotundifolium



Bupleurum sibthorpianum



Bupleurum tenuissimum $_{\scriptscriptstyle L.}$

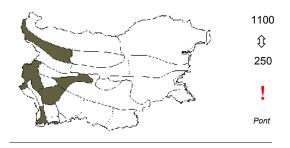
800 Û
0

Bupleurum uechtritzianum S. Stoyanov

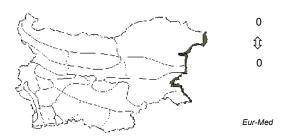
Butomus umbellatus

700 tr 0

Cachrys alpina M. Bieb.



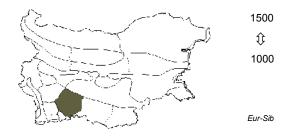
Cakile maritima Scop.



$\underset{(L.)\ Roth}{\textbf{Calamagrostis arundinacea}}$

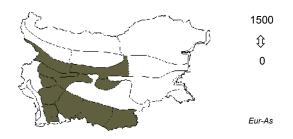


Calamagrostis canescens (Weber) Roth



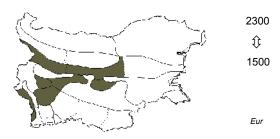
Calamagrostis epigeios





Calamagrostis villosa

(Chaix) J. F. Gmel.



Calamintha grandiflora $_{(L.)\ Moench}$

2000 ${\bf \hat{t}}$ 200 Pont-OT

Calamintha nepeta (L.) Savi



Calamintha sylvatica Bromf.

1500 ${\bf \hat{U}}$ 200

Eur-OT

$\underset{(\mathrm{Haller\ f.})\ \mathrm{Koeler}}{\textbf{Calamagrostis\ pseudophragmites}}$ Caldesia parnassifolia (L.) Pall.



Calendula arvensis



Calepina irregularis (Asso) Thell.



Callitriche brutia



Callitriche cophocarpa Sendtn.



Callitriche palustris



Callitriche platycarpa Kütz.



Eur-Pont

Callitriche stagnalis

100 ①
0

Kos

Calluna vulgaris

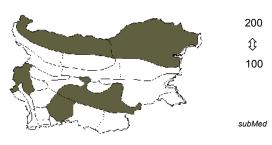
Caltha alpestris

Schott, Nyman & Kotschy

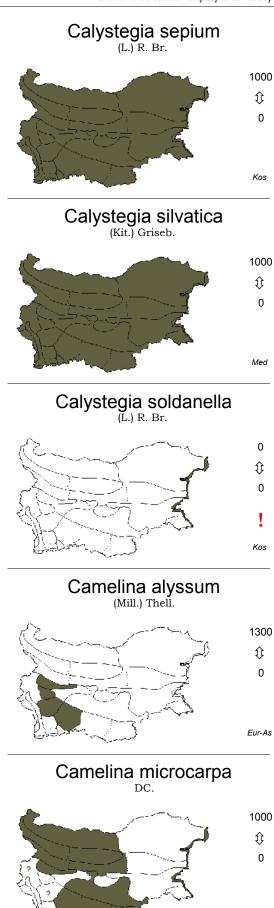


Caltha cornuta

Schott, Nyman & Kotschy

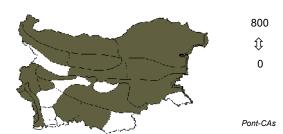


Caltha laeta Schott, Nyman & Kotschy 2000 ${\bf \hat{t}}$ 1500 Caltha minor Mill. 1700 ${\bf \hat{t}}$ 500 Boreal Caltha palustris 1600 $\hat{\mathbf{t}}$ 0 Eur Caltha polypetala Hochst. ex Lorent 700 ${\bf \hat{t}}$ 500 Pont-Med Caltha rostrata Borbás 2200 $\hat{\mathbf{U}}$ 1700 Eur



Pont-CAs

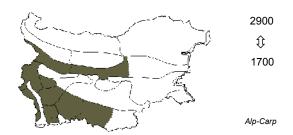
Camelina rumelica



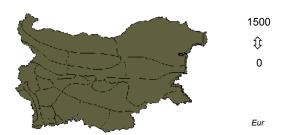
Camelina sativa (L.) Crantz



$\underset{^{Jacq.}}{\mathsf{Campanula}} \ \mathsf{alpina}$



Campanula bononiensis



Campanula cervicaria



Campanula cochlearifolia



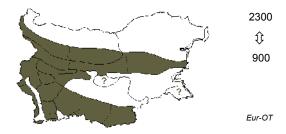
Campanula euxina (Velen.) Ančev



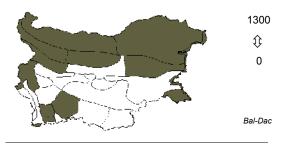
Campanula foliosa



Campanula glomerata



Campanula grossekii



$\underset{\mathrm{Koch}}{\mathsf{Campanula}} \ \underset{\mathrm{Koch}}{\mathsf{hemschinica}}$



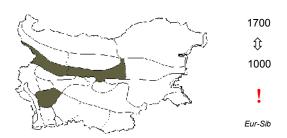
Campanula jordanovii Ančev & Kovanda



Campanula lanata Friv.



Campanula latifolia

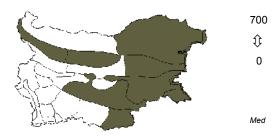


Campanula lingulata Waldst. & Kit.



Campanula macrostachya

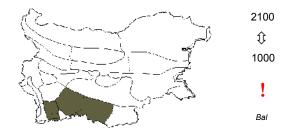
Waldst. & Kit.



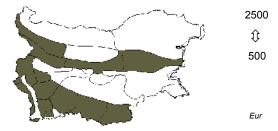
Campanula moesiaca Velen.



Campanula orphanidea Boiss.



Campanula patula



Campanula persicifolia



Bal

Campanula phrygia Jaub. & Spach



Campanula rapunculoides



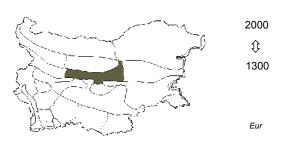
Campanula rapunculus



Campanula rotundifolia



Campanula scheuchzeri



Campanula scutellata

1000 ${\bf \hat{t}}$ 200

Campanula sibirica

700 Û 0 subMed

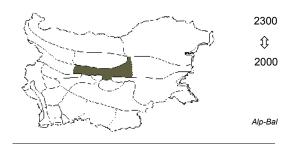
Campanula sparsa



Campanula spatulata Sm.

2200 ${\bf \hat{t}}$ 1500

Campanula thyrsoides



Campanula trachelium



Campanula transsilvanica Schur ex Andrae



Campanula trojanensis Kovanda & Ančev



Campanula velebitica



Campanula versicolor



Camphorosma annua



Camphorosma monspeliaca

500 ①

0

Eur-As

Cannabis sativa

500 ①

O

Adv

Capsella bursa-pastoris (L.) Medicus

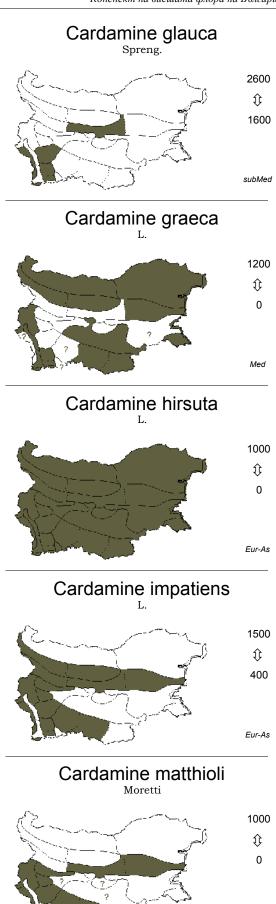
2000 Û 0

Capsella rubella

700 ①
0

subMed

Caragana frutex (L.) C. Koch 200 $\hat{\mathbf{t}}$ 200 Pont-Sib Cardamine acris Griseb. 2200 \hat{v} 1400 subMed Cardamine amara 2200 $\hat{\mathbf{t}}$ 1000 Eur-As Cardamine bulbifera (L.) Crantz 1400 **Û** 0 subBoreal Cardamine flexuosa 1500 $\hat{\mathbf{U}}$ 600 Boreal

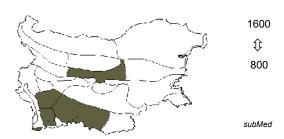


Eur

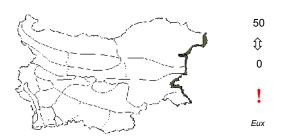
Cardamine parviflora



Cardamine pectinata Pall. ex DC.



Cardamine penzesii



Cardamine quinquefolia (M. Bieb.) Schmalh.



Cardamine resedifolia



Cardamine rivularis

Carp-Bal



1000 ♀
0

Cardaria draba

1000 ♀
0

Eur-Med

Carduus acanthoides

1000 ♀
0

Eur

Carduus acicularis Bertol.

Carduus adpressus C. A. Mey.



Carduus candicans Waldst. & Kit.



Carduus carduelis (L.) Gren.



Carduus crispus

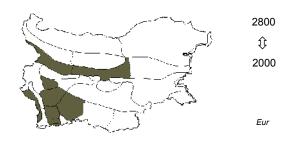


Carduus hamulosus Ehrh.



Carduus kerneri

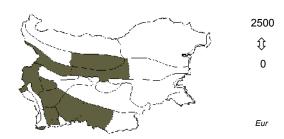
Simonk.



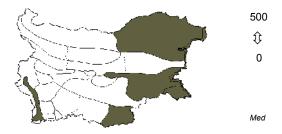
Carduus nutans



$\underset{(L.)\ Jacq.}{\text{Carduus personata}}$



Carduus pycnocephallus

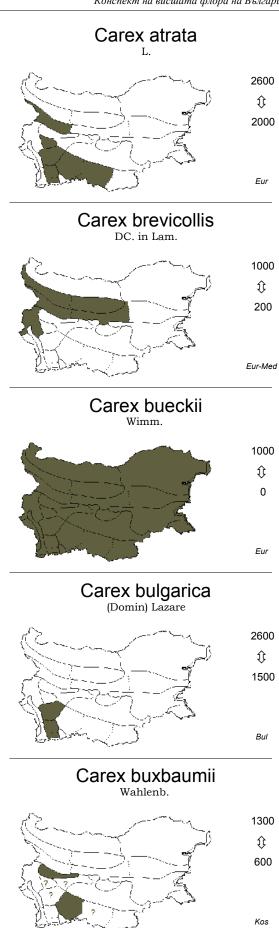


Carduus thoermeri

Weinm.

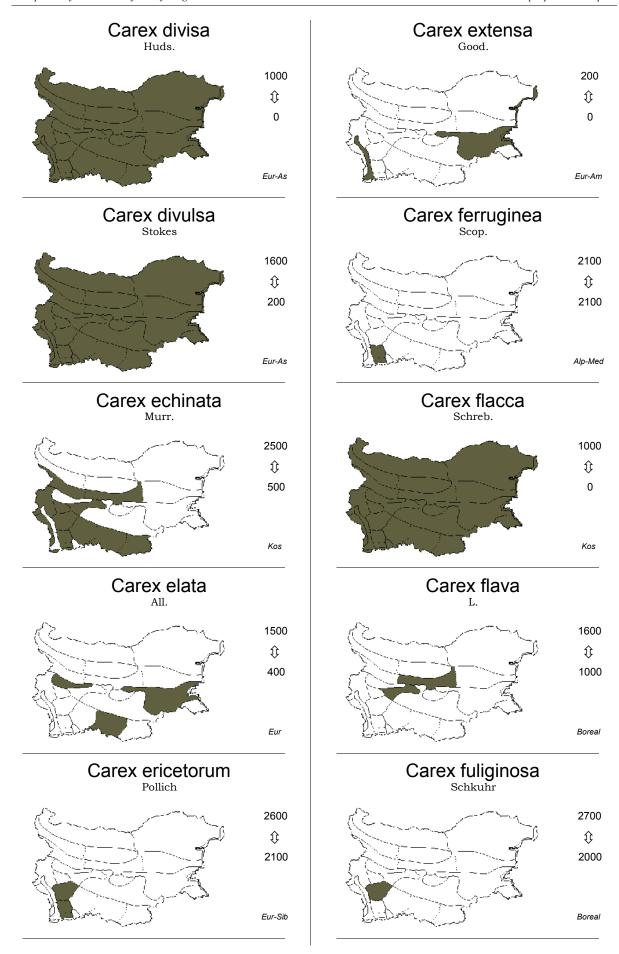


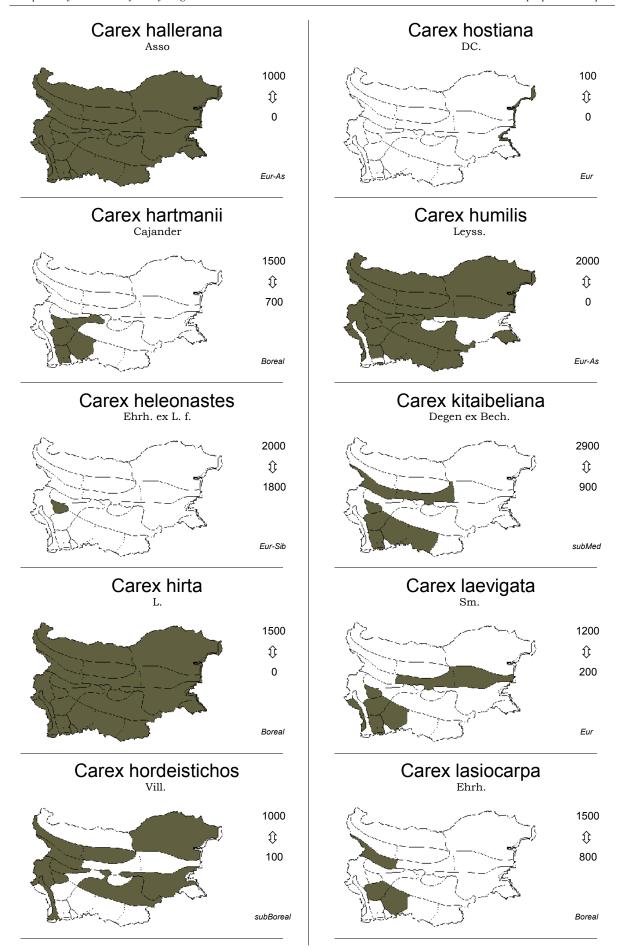
Carduus thracicus (Velen.) Hayek 1000 **Û** Carduus tmoleus Boiss. 2000 \hat{v} 1500 Bal-Anat Carex acuta 2400 $\hat{\mathbf{t}}$ 0 Eur-Sib Carex acutiformis Ehrh. 1100 ${\bf \hat{t}}$ 0 Kos Carex appropinquata A. Schumach. 1000 $\hat{\mathbf{U}}$ 500

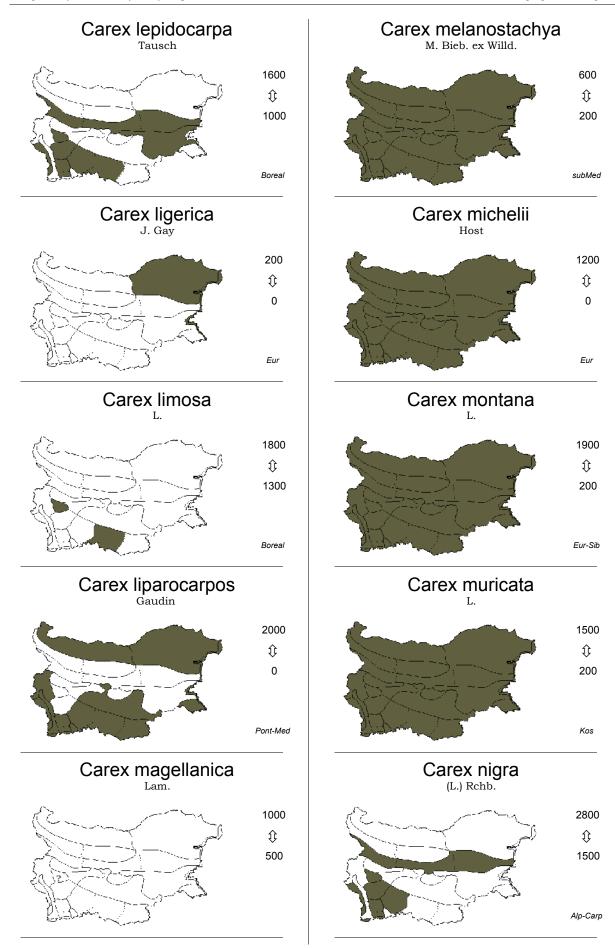


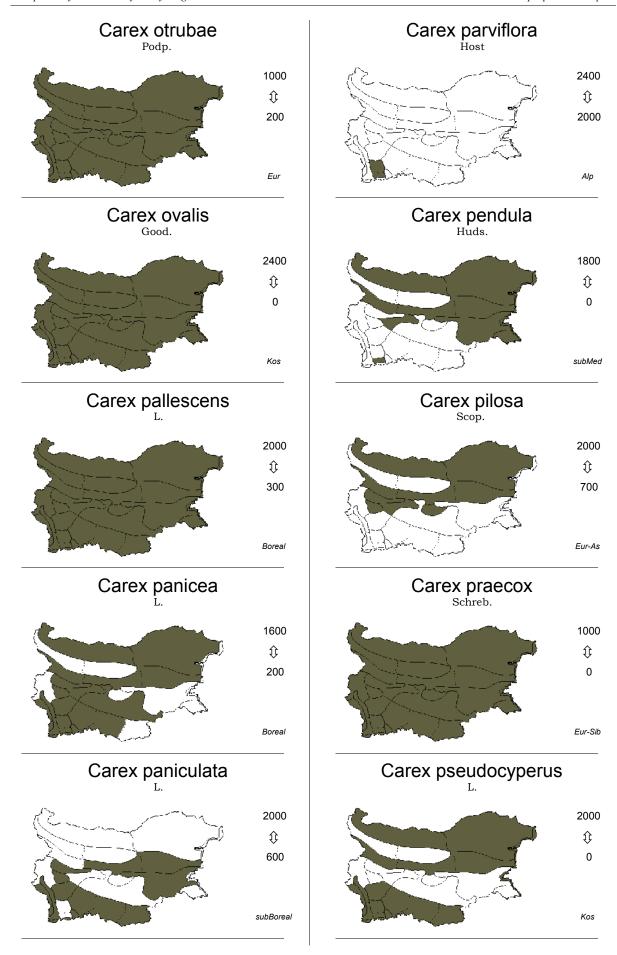
Eur-Sib

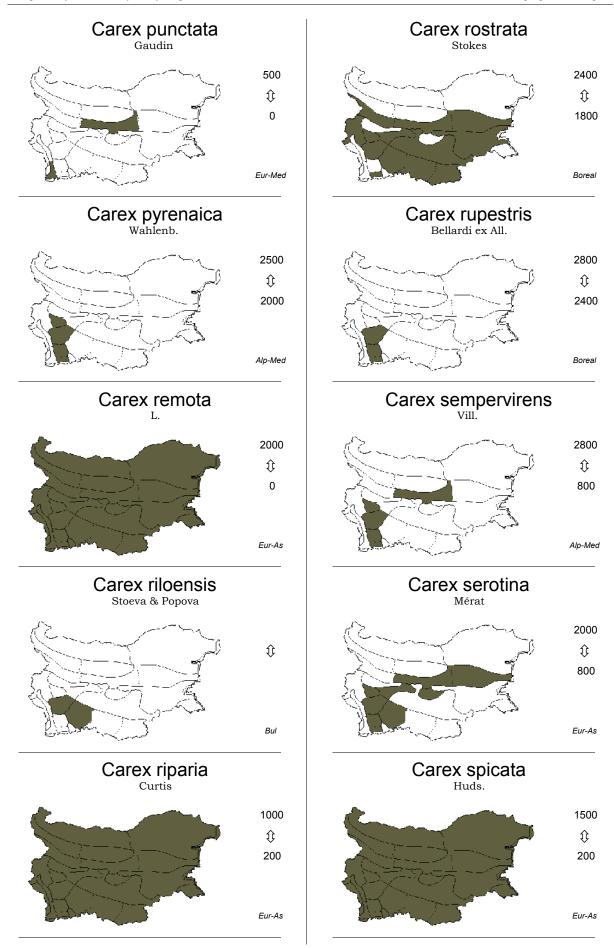
Carex caespitosa Carex depauperata Curtis ex With. 1000 800 ${\bf \hat{U}}$ Û 400 0 subMed Carex caryophyllea Latourr. Carex digitata 2700 2400 \hat{v} ${\bf \hat{t}}$ 200 0 Boreal Eur-Sib Carex distachya Desf. Carex curta Good. 400 2500 $\hat{\mathbf{t}}$ Û 1400 0 Boreal Med Carex distans Carex curvula 2900 1300 ${\bf \hat{v}}$ \hat{v} 2300 0 Alp-Med Eur-As Carex dacica Carex disticha Heuff. Huds. 700 2700 ${\bf \hat{v}}$ $\hat{\mathbf{U}}$ 2300 20 Pont-Sib Carp-Bal-Cauc



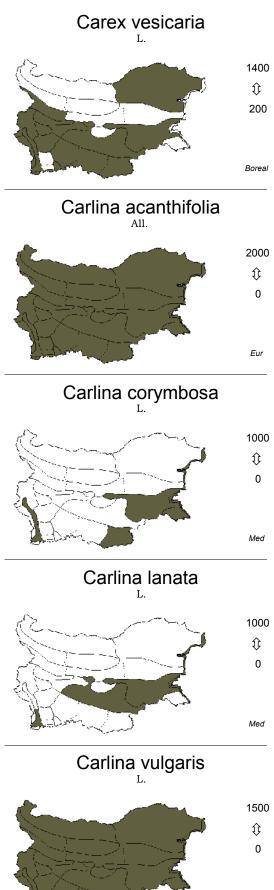






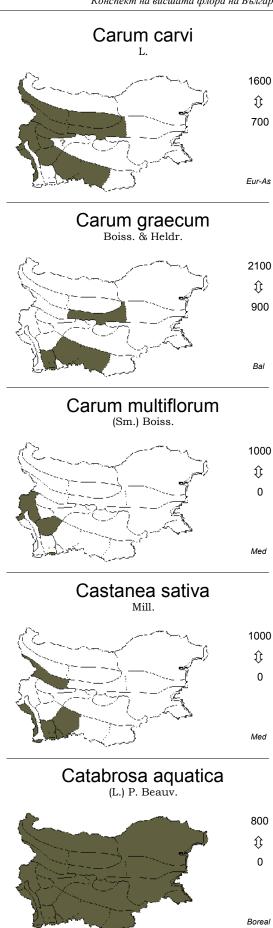


Carex strigosa 100 **Û** Eur-OT Carex sylvatica 1600 \hat{v} 200 subMed Carex tomentosa 1500 $\hat{\mathbf{t}}$ 200 Eur-Sib Carex tricolor Velen. 2700 \hat{v} 1700 Bul Carex umbrosa Host 2000 $\hat{\mathbf{U}}$ 1500 Eur



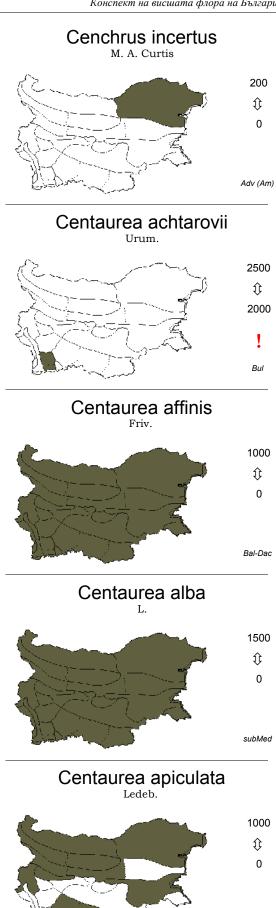
Eur-Med

Carpesium cernuum 1000 **Û** Carpinus betulus 1500 ${\bf \hat{t}}$ 0 Eur-subMed Carpinus orientalis 1100 $\hat{\mathbf{t}}$ 0 subMed Carthamus dentatus (Forssk.) Vahl 1000 **Û** 0 Bal-Anat Carthamus Ianatus 1000 **Û** 0



subMed

Catalpa speciosa (Warder) Engelm. 600 $\hat{\mathbf{t}}$ 500 Adv (NAm) Caucalis platycarpos 1200 **Û** 0 Eur-CAs Celtis australis 500 $\hat{\mathbf{t}}$ 0 Med Celtis plachoniana $_{\rm K.I.\ Chr.}$ 500 \hat{v} 0 Pont Celtis tournefortii Lam. 1000 $\hat{\mathbf{U}}$ 500



Eur-Sib

Eur-As

Centaurea arenaria M. Bieb.



Centaurea biebersteinii



Centaurea bovina Velen.



Centaurea calcitrapa



Centaurea caliacrae Prodán



Centaurea calocephala Willd.



Centaurea calvescens

Pančić



Centaurea chrysolepis Vis.



Centaurea cuneifolia



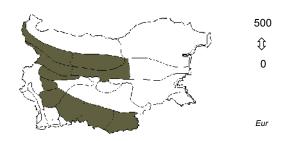
Centaurea cyanus



Centaurea davidovii



Centaurea degeniana H. Wagner



$\underset{\text{M. Bieb.}}{\text{Centaurea depressa}}$



Centaurea deusta Ten.

1500 \hat{v} 0 subMed

Centaurea diffusa



Centaurea diospolitana

(Bancheva & S. Stoyanov) Bancheva



Centaurea euxina

Velen.



Centaurea finazzeri

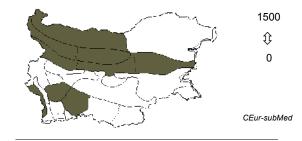
Adamović



Centaurea gracilenta Velen.



Centaurea grinensis



Centaurea iberica

Trev. ex Spreng.



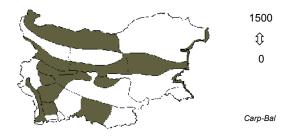
Centaurea immanuelis-loewii

Degen



Centaurea indurata

Janka



Centaurea inermis

Velen.



Centaurea jacea



Centaurea jankae

D. Brândză



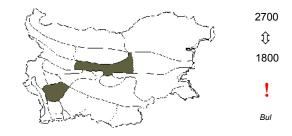
Centaurea kamciensis

Kočev & S. P. Gančev



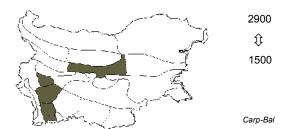
Centaurea kernerana

Janka



Centaurea kotschyana

Heuff. ex Koch



Centaurea mannagettae Podp.

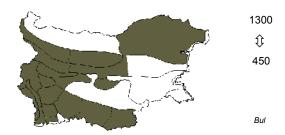


Centaurea marshalliana Spreng.



Centaurea moesiaca

Urum. & H. Wagner

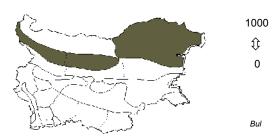


Centaurea napulifera

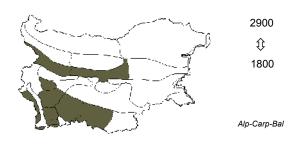


Centaurea neiceffii

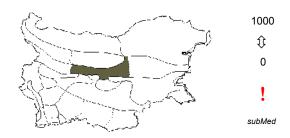
Degen & H. Wagner



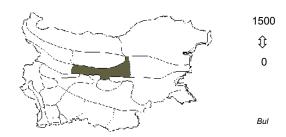
Centaurea nervosa



$\underset{\text{Willd.}}{\text{Centaurea nigrescens}}$



Centaurea ognianoffii



Centaurea orbelica

Velen.



Centaurea orientalis



Centaurea ovina

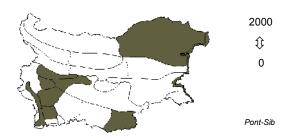
Pall. ex Willd.



Centaurea pallidior



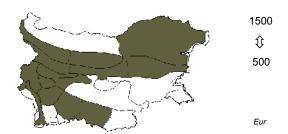
Centaurea pannonica (Heuffel) Simonk.



Centaurea parilica Stoj. & Stef.



Centaurea phrygia



Centaurea pichleri



Centaurea pseudoaxillaris Stef. & T. Georg.



Centaurea rocheliana

(Heuffel) Dostál



Centaurea rumelica

Boiss.



Centaurea rutifolia



Centaurea salonitana



Centaurea scabiosa

1500 Û 0

Centaurea solstitialis

Eur-Sib



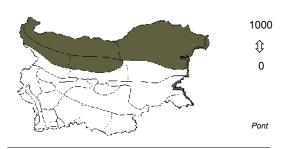
Centaurea splendens



Centaurea stenolepis

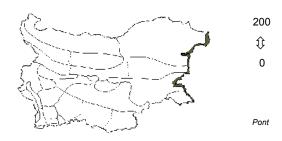


Centaurea stereophylla Besser



Centaurea sterilis

Steven



Centaurea stoebe

L.



Centaurea subcilliaris

Boiss. & Heldr.



Centaurea tenuiflora

DC.



Centaurea thirkei

Sch. Bip.



Centaurea thracica

(Janka) Hayek



Centaurea trinervia Willd.



Centaurea triumfetti



Centaurea tuberosa

2200 $\hat{\mathbf{U}}$ 1000

Centaurea tymphaea Hausskn.



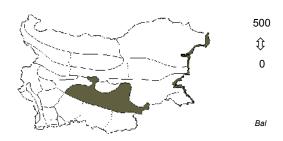
Centaurea vandasii

Velen.



Centaurea varnensis

Velen.



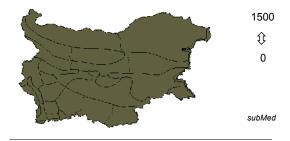
Centaurea velenovskyi Adamović



Centaurea wagenitziana Bancheva & Kit Tan



Centaurium erythraea



Bal

Centaurium littorale (D. Turn.) Gilm.

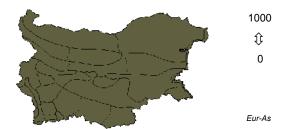


Centaurium maritimum (L.) Fritsch

100 1 0

Med

Centaurium pulchellum (Sw.) Druce



Centaurium spicatum (L.) Fritsch

600 1 0 Eur-As

Centaurium turcicum (Velen.) Ronniger ex Fritsch



Centranthus kellereri

(Stoj., Stef. & T. Georg.) Stoj. et Stef.



Cephalanthera damasonium (Mill.) Druce

1500 Û 0 subMed

Cephalanthera epipactoides Fisch. & C. A. Mey.



Cephalanthera longifolia (L.) Fritsch

1000 ${\bf \hat{t}}$ 0 Eur-OT

Cephalanthera rubra (L.) Rich.

1700 **Û** 0 Eur-As

Cephalaria flava (Sm.) Szabó



Cephalaria laevigata (Waldst. & Kit.) Schrad.



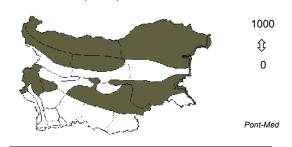
Cephalaria syriaca (L.) Roem. & Schult.



Cephalaria transsylvanica (L.) Roem. & Schult.



Cephalaria uralensis (Murr.) Roem. & Schult.



Cephalorrhynchus tuberosus

(Steven) Schchian



Cerastium alpinum



Cerastium arvense



Cerastium banaticum

(Rochel) Heuff.



Cerastium brachypetalum

Pers.



$\underset{\text{Uechtr.}}{\text{Cerastium bulgaricum}}$



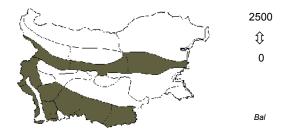
Cerastium cerastoides

(L.) Britton



Cerastium decalvans

Schloss.



Cerastium dubium

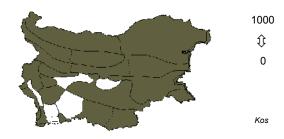
(Bast.) Guépin



Cerastium fontanum Baumg.

2400 **Û** 0 Eur

Cerastium glomeratum Thuill.



Cerastium Iuridum

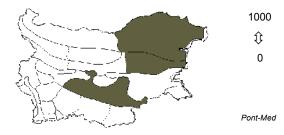
Guss.



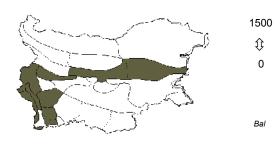
Cerastium moesiacum



$Cerastium \underset{\scriptscriptstyle L.}{\text{perfoliatum}}$



Cerastium petricola



Cerastium pumilum



Cerastium rectum



Cerastium roeseri



Cerastium semidecandrum



Cerastium tauricum Spreng.



Cerastium tenoreanum



subMed

Cerastium velenovskyi

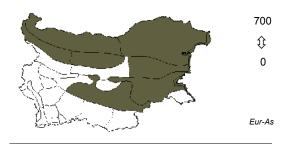


Ceratocarpus arenarius



Ceratocephalus falcatus (L.) Pers.

Ceratocephalus testiculatus (Crantz) Roth



Ceratophyllum demersum



Ceratophyllum muricatum Cham.



Ceratophyllum submersum



Cercis siliquastrum



Cerinthe glabra



Cerinthe minor

1200 ①
0

Pont-Med

$\textbf{Ceterach officinarum} \\ \textbf{\tiny DC.} \\$



Chaenorhinum minus (L.) Lange

1000 Û 0

Chaerophyllum aureum



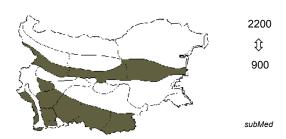
Chaerophyllum bulbosum



Chaerophyllum byzantinum



Chaerophyllum hirsutum



Chaerophyllum temulentum



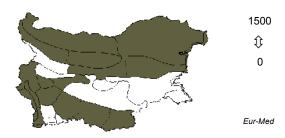
Chamaecytisus absinthioides (Janka) Kuzmanov



Chamaecytisus albus (Hack.) Rothm.



Chamaecytisus austriacus



Chamaecytisus banaticus (Griseb. & Schenk) Rothm.

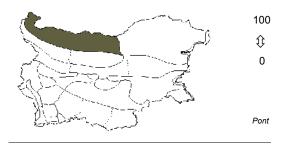


Chamaecytisus calcareus (Velen.) Kuzmanov

Chamaecytisus ciliatus (Wahlenb.) Rothm.



Chamaecytisus danubialis (Velen.) Rothm.



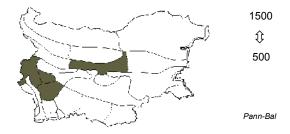
Chamaecytisus frivaldszkyanus (Degen) Kuzmanov

1200 Û 0

Chamaecytisus glaber (L. f.) Rothm.



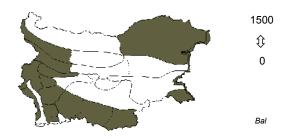
Chamaecytisus heuffelii (Wierzb.) Rothm.



Chamaecytisus hirsutus



Chamaecytisus jankae (Velen.) Rothm.



Chamaecytisus kovacevii (Velen.) Rothm.

1500 Û 0

Chamaecytisus lejocarpus (A. Kern.) Rothm.

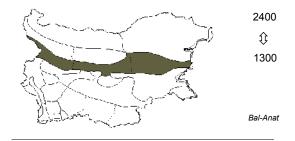
Chamaecytisus neiceffii

(Urum.) Rothm.



Chamaecytisus polytrichus (M. Bieb.) Rothm.

Chamaecytisus pygmaeus (Willd.) Rothm.



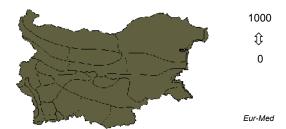
Chamaecytisus ratisbonensis (Schaeff.) Rothm.

1000 **Û** 1000

Chamaecytisus rochelii (Wierzb.) Rothm.



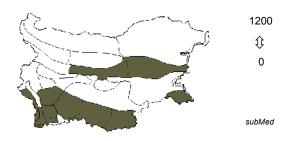
$\underset{(L.)\;\mathrm{Link}}{\mathsf{Chamaecytisus}}\;\mathsf{supinus}$



Chamaespartium sagittale (L.) Gibbs



Cheilanthes marantae (L.) Domin.



Cheilanthes persica

(Bory) Mett. ex Kuhn



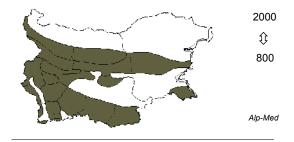
Chelidonium majus

1500 Û 0 Eur-As

1000 Û 0 Kos

250 Û 0 Adv

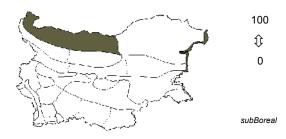
Chenopodium bonus-henricus



Chenopodium botrys



$\begin{array}{c} \text{Chenopodium chenopodioides} \\ \text{(L.) Aellen.} \end{array}$



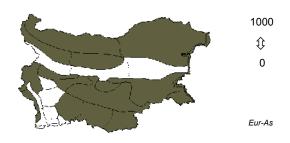
$\begin{array}{c} \text{Chenopodium ficifolium} \\ \text{Sm.} \end{array}$



$\underset{\mathrm{Asch.}}{\mathsf{Chenopodium}} \ \mathsf{foliosum}$



Chenopodium glaucum



Chenopodium hybridum

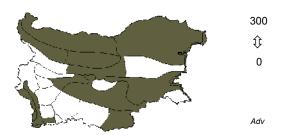
1000 ♀
0

Boreal

$Chenopodium\ missouriense$ $_{\text{Aellen}}$



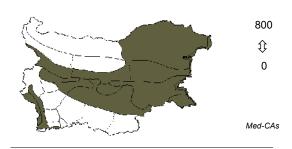
$Chenopodium_{\stackrel{L.}{L.}} multifidum$



Chenopodium murale $_{\scriptscriptstyle L.}$



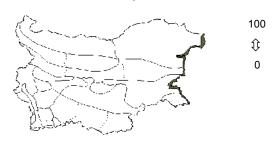
Chenopodium opulifolium Schrad. ex Koch & Ziz



Chenopodium polyspermum



Chenopodium pratericola



Chenopodium probstii



$\underset{R.\;\mathrm{Br.}}{\text{Chenopodium pumilio}}$



Chenopodium rubrum



Chenopodium schraderianum



${\color{blue} Chenopodium striatiforme} \\ {\color{blue} Murr}$



${\color{blue} Chenopodium \ strictum}_{\tiny Roth}$



$\begin{array}{c} \text{Chenopodium urbicum} \\ {}_{\text{L.}} \end{array}$

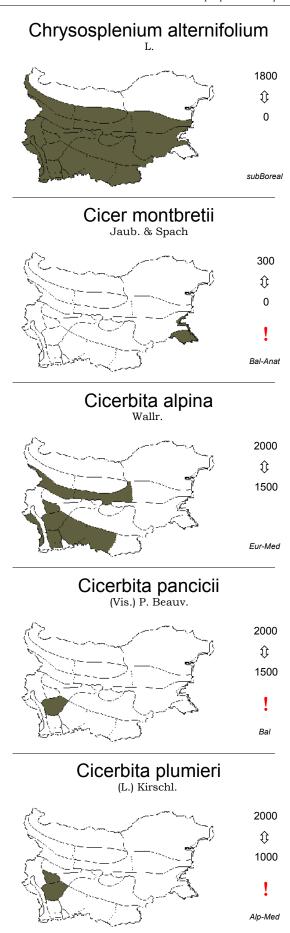
1000 ①
0

Eur-As

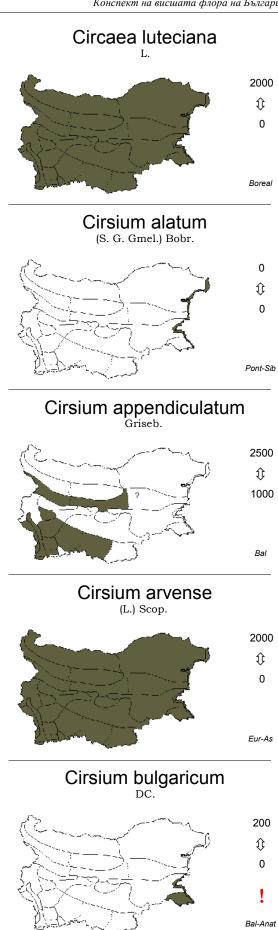
Chenopodium vulvaria

800 Û
0

Chondrilla juncea 1000 **Û** Eur-Sib Chondrilla urumoffii 1800 ${\bf \hat{t}}$ 800 Bal Chorispora tenella (Pall.) DC. 150 $\hat{\mathbf{t}}$ 0 Eur-As Chrozophora tinctoria (L.) Juss. 300 \hat{v} 0 Med $\underset{(L.)\ Trin.}{Chrysopogon}\ gryllus$ 1300 **Û** 0 Pont-Med

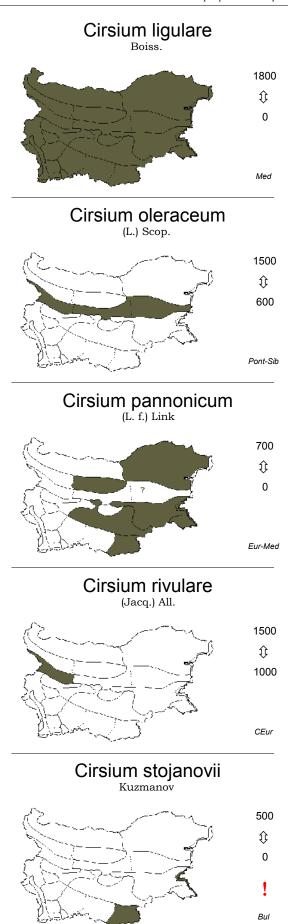


Cichorium endivia 200 **Û** Cichorium inthybus 1000 ${\bf \hat{t}}$ 0 Eur-Sib Cicuta virosa 100 $\hat{\mathbf{t}}$ 0 Eur-As Cionura erecta (L.) Griseb. 300 ${\bf \hat{t}}$ 0 Med Circaea alpina 1450 $\hat{\mathbf{U}}$ 1450 !



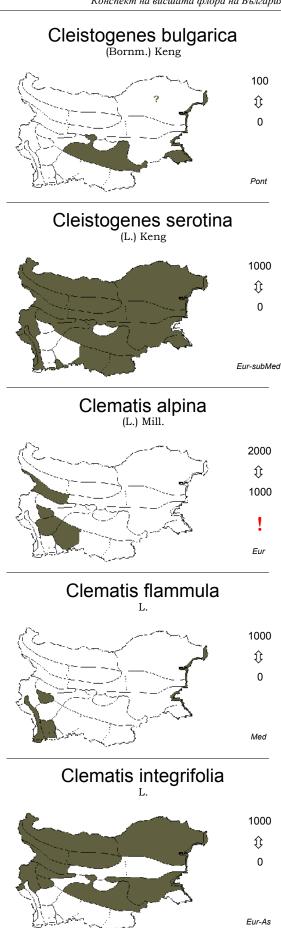
Boreal

Cirsium candelabrum 2000 $\hat{\mathbf{t}}$ 500 Carp-Bal Cirsium canum (L.) All. 1000 ${\bf \hat{t}}$ 0 Eur-Med Cirsium creticum (Lam.) D'Urv. 1000 $\hat{\mathbf{t}}$ 0 Med Cirsium heterotrichum Pančić 2500 **Û** 0 subBal Cirsium italicum (Savi) DC. 1000 **Û** 0



Med

Cirsium vulgare (Savi) Ten. 1500 **Û** Eur-Med Cistus incanus 700 **Û** 0 Med Cistus salviifolius 200 $\hat{\mathbf{t}}$ 0 Eur-As Citrullus colocynthis (L.) Schrad. 200 \hat{v} 0 Adv Cladium mariscus (L.) Pohl 400 **Û** 0



Kos

700

Û

0

Med

1000 ‡

0

Med

1500

Û

0

Med

1000 ‡

500

Bul

1800

Û

0

Med-Sib

Clematis recta Clypeola jonthlaspi 2000 **Û** Clematis vitalba Clypeola microcarpa 2000 **Û** 0 Eur Clematis viticella Cnicus benedictus 1000 $\hat{\mathbf{t}}$ 0 Pont-Med Cleome ornithopodioides Cnicus bulgaricus 800 \hat{v} 0 Med-CAs Clinopodium vulgare Cnidium silaifolium (Jacq.) Simonk. 2000 ${\bf \hat{v}}$ 0 subBoreal

Coeloglossum viride (L.) Hartm.



Colchicum autumnale



Colchicum biebersteinii



Colchicum bivonae Guss.



Colchicum callycimbium Stearn & Stef.



Colchicum davidovii



Colchicum diampolis Delip. & Cheschm.



Colchicum doerfleri

Halácsy



Colchicum haynaldii



Colchicum rhodopaeum

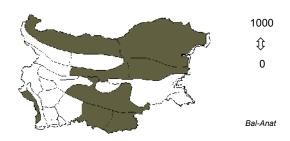
Kov.



Colchicum triphyllum



Colchicum turcicum Janka



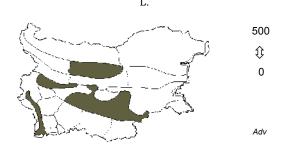
Colutea arborescens



Comandra elegans (Rochel ex Rchb.) Rchb. f.



Commelina communis



Conium maculatum

Eur-As

1200

Û 0

Conringia austriaca (Jacq.) Sweet



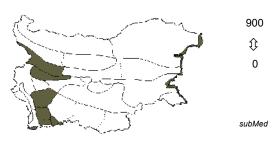
Conringia orientalis (L.) Dumort.



Conringia planisiliqua Fisch. & C. A. Mey.



Consolida ajacis

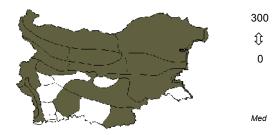


Consolida hellespontica

(Boiss.) Chater



Consolida hispanica (Costa) Greuter & Burdet



Consolida regalis



Convallaria majalis



Convolvulus althaeoides



Convolvulus arvensis

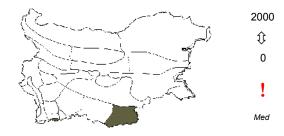


Convolvulus betonicifolius

500 Û 0 Pont-Med

Convolvulus boissieri

Steud.



Convolvulus cantabrica

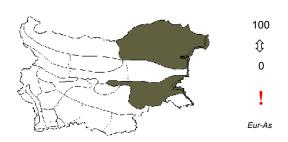


Convolvulus holosericeus

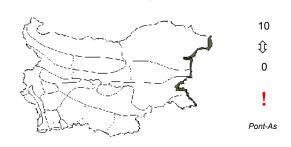
M. Bieb.



Convolvulus lineatus



Convolvulus persicus



Convolvulus pilosellifolius $_{\mathrm{Desr.}}$



Conyza bonnariensis (L.) Cronquist

300 \hat{v} 0 Adv (SAm)

Conyza canadensis (L.) Cronquist



Conyza sumatrensis

(Retz.) E. Walker



Corallorhiza trifida

Châtel



Coriandrum sativum



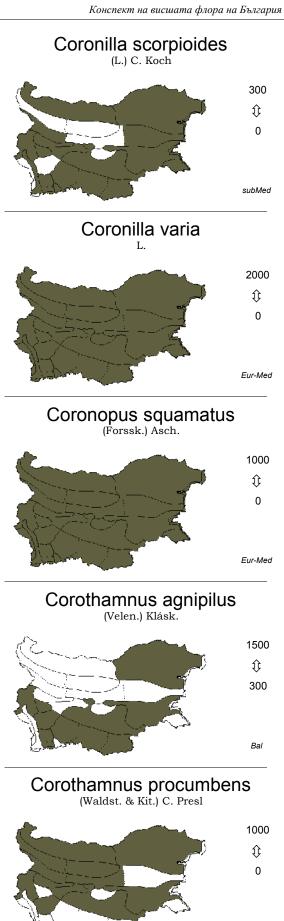
Corispermum marschalii Steven



Corispermum nitidum



Cornus mas 1300 \hat{v} Cornus sanguinea 1800 **Û** 0 subMed Coronilla cretica 500 $\hat{\mathbf{t}}$ 0 Med Coronilla elegans 300 \hat{v} 0 Pont Coronilla emerus 900 **Û** 0



Eur-Med

subMed

Corothamnus rectipilosus

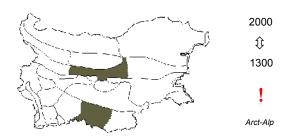
(Adamović) Skalická



Corrigiola litoralis



Cortusa mathioli



$\underset{(L.)\ \mathrm{DC.}}{\text{Corydalis bulbosa}}$



Corydalis marschalliana (Pall.) Pers.



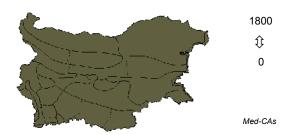
Corydalis slivenensis Velen.



Corydalis solida (L.) Schwarz



Corylus avellana



Corylus colurna



Corynephorus divaricatus (Pourret) Breistr.



$\underset{Scop.}{Cotinus}\ coggygria$ 1000 **Û**

Med-As

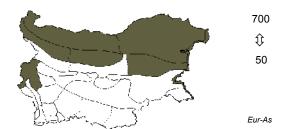
Cotoneaster integerrimus Medicus



Cotoneaster nebrodensis (Guss.) C. Koch



Cotoneaster niger (Thunb.) Fr.



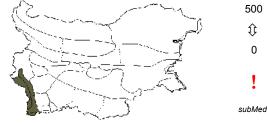
Crambe maritima



Crambe tataria



Crassula tillaea Lest.-Garl.



Crataegus heldreichii Boiss.

500 Û 0 Bal

Crataegus microphylla

100 Û 0 Eux

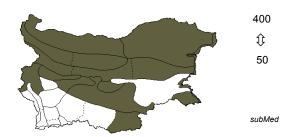
Crataegus monogyna Jacq.

1500 Û 0 subBoreal

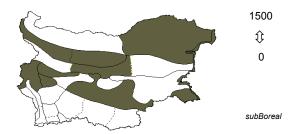
Crataegus orientalis Pall. ex M. Bieb.



Crataegus pentagyna Waldst. & Kit.



Crataegus rhipidophylla



Crepis biennis



Crepis bithynica



Crepis capillaris (L.) Wallr.



Crepis conyzifolia (Gouan) A. Kern.

2300 ${\bf \hat{t}}$ 600 subMed

Crepis foetida

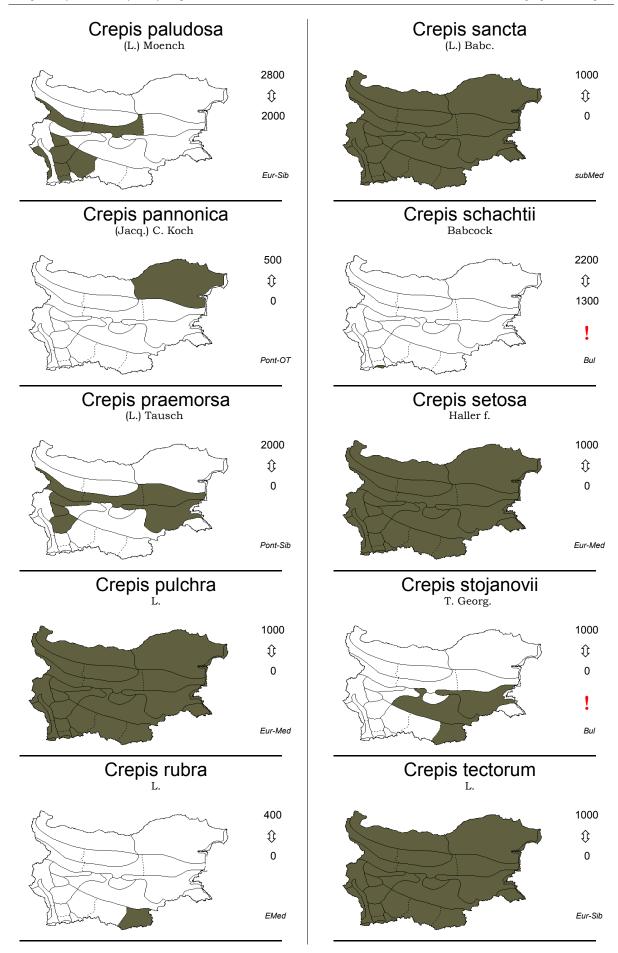


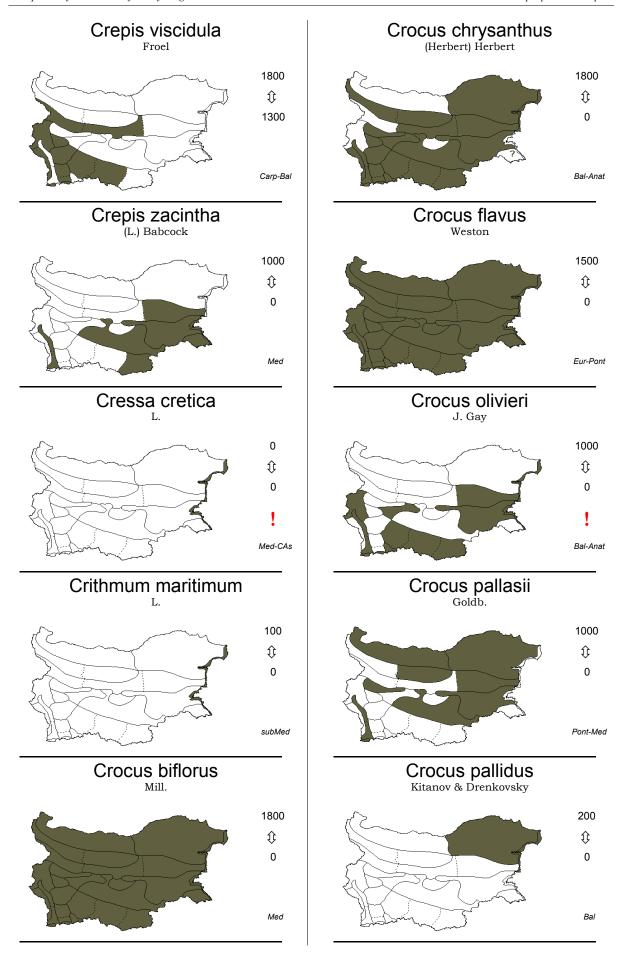
Crepis mollis (Jacq.) Asch.



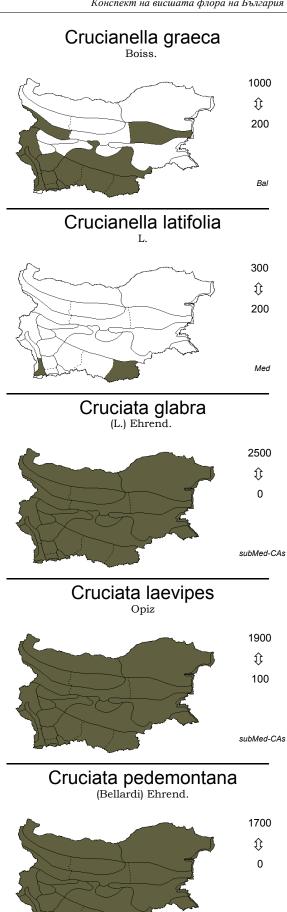
Crepis nicaeensis







Crocus pulchellus 1500 **Û** Bal-Anat Crocus reticulatus Steven ex Adams 1000 ${\bf \hat{t}}$ 0 Pont-Med Crocus tommasinianus Herbert 700 $\hat{\mathbf{t}}$ 600 Pann-Bal Crocus veluchensis Herbert 2500 Û 1500 Bal Crucianella angustifolia 1300 **Û** 0 Med



Med-CAs

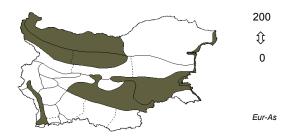
Crupina crupinastrum (Moris) Vis.



Crupina vulgaris



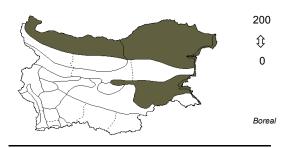
$\underset{(L.)\; Aiton}{\text{Crypsis aculeata}}$



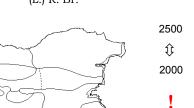
Crypsis alopecuroides (Piller & Mitterp.) Schrad.



Crypsis schoenoides (L.) Lam.



Cryptogramma crispa

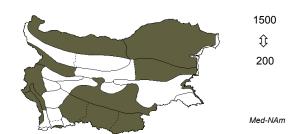


Eur-Sib

Cucubalus baccifer



Cuscuta approximata



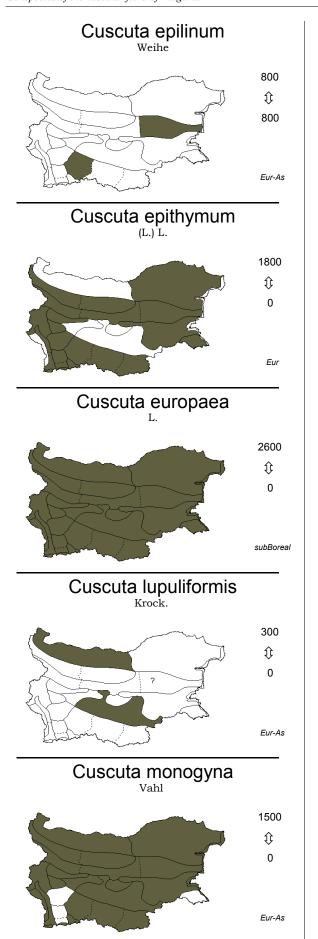
Cuscuta campestris

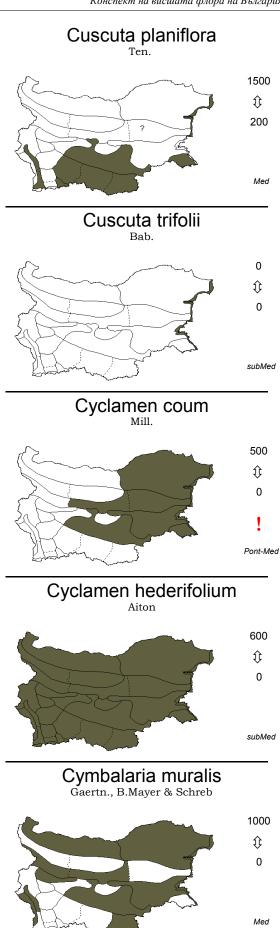
1800 ①

Adv (NAm)

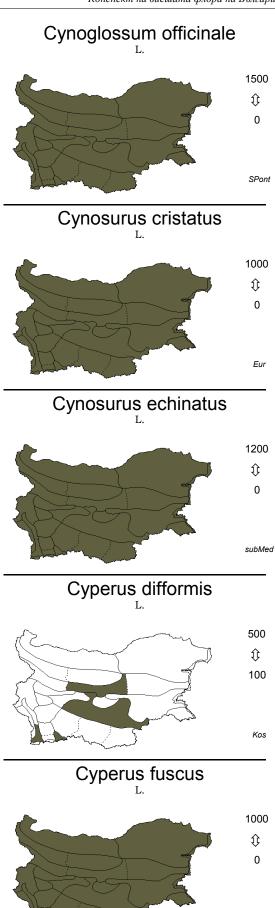
Cuscuta cesatiana

300 Û 0





Cynanchum acutum 300 **Û** Med-CAs Cynodon dactylon (L.) Pers. 800 **Û** 0 Kos $Cynoglossum_{\stackrel{Mill.}{i}} creticum$ 1000 Û 0 Med-CAs $Cynoglossum \underbrace{germanicum}_{Jacq.}$ 2900 \hat{v} 1000 Eur-Med Cynoglossum montanum 2000 ${\bf \hat{v}}$ 0 subMed



Boreal

Cyperus strigosus



Cypripedium calceolus



Cystopteris alpina (Lam.) Desv.



Cystopteris fragilis (L.) Bernh.



Cytinus clusii (Nyman) Gand.



Dactylis glomerata



Dactylorhiza baumanniana Hölz. & Künkele



Dactylorhiza cordigera (Fries) Sóo



Dactylorhiza incarnata (L.) Sóo



Dactylorhiza kalopissii _{E. Nelson}

Dactylorhiza maculata



Dactylorhiza pindica B. & E. Willing



Dactylorhiza romana (Sebast. & Mauri) Sóo



Dactylorhiza saccifera (Brongn.) Sóo



Dactylorhiza sambucina (L.) Sóo



Danthonia alpina



Danthoniastrum compactum (Boiss. & Heldr.) Holub

300 Û 0

Bal-Anat

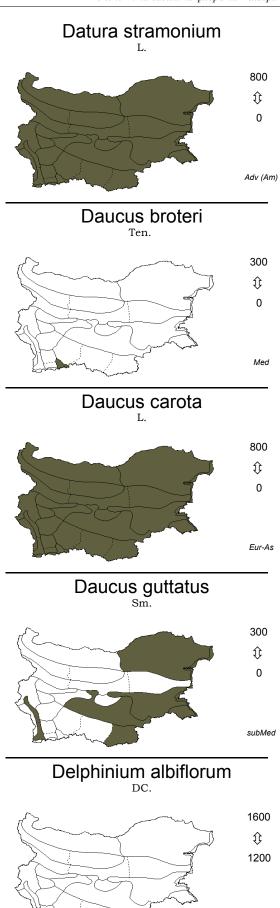
Daphne blagayana Freyer

${\bf Daphne\ cneorum\ }_{{\rm L.}}$

2700 th 900 subMed

Daphne laureola

Daphne mezereum 2000 ${\bf \hat{v}}$ 600 Eur-Sib Daphne oleoides Schreb. 2500 \hat{v} 1000 subMed Daphne pontica 700 $\hat{\mathbf{t}}$ 50 Pont $\underset{(L.) \ Cand.}{\text{Dasypyrum villosum}}$ 1000 ${\bf \hat{t}}$ 0 subMed Datura innoxia 500 **Û** 0 Adv (Am)



Bal

Delphinium balcanicum



Delphinium fissum Waldst. & Kit.



Delphinium peregrinum



Deschampsia caespitosa (L.) P. Beauv.



Descurainia sophia (L.) Webb ex Prantl



Desmazeria rigida

(L.) Tutin



Dianthus aridus

Griseb. ex Janka



Dianthus armeria



Dianthus barbatus



Dianthus burgasensis



Dianthus capitatus Balb. ex DC.



Dianthus cartusianorum



Dianthus collinus Waldst. & Kit.



Dianthus cruentus Griseb.



Dianthus deltoides



Dianthus diffusus



Dianthus dobrogensis Prodan



Dianthus drenowskyanus Rech. f.



Dianthus freynii Vand.



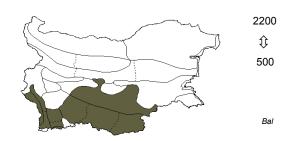
Dianthus giganteiformis Borbás



Dianthus giganteus $_{\mathrm{D}^{\prime}\mathrm{Urv.}}$



Dianthus gracilis



Dianthus leptopetalus $\underset{\mathrm{Willd.}}{\mathsf{Dianthus}}$



Dianthus membranaceus Borbás



Dianthus microlepis Boiss.



Dianthus moesiacus

Vis. & Pančić



Dianthus nardiformis

Janka

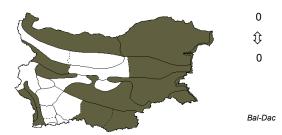


Dianthus noeanus

Boiss.



Dianthus pallens _{Sm.}



Dianthus pallidiflorus $_{\mathrm{Ser.}}$

0 Û 0 Pont-Sib

Dianthus pelviformis



Dianthus petraeus Waldst. & Kit.



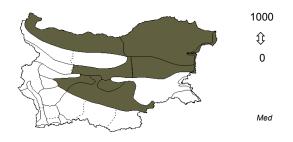
Dianthus pinifolius



Dianthus pontederae



Dianthus pseudarmeria $_{\mathrm{M.\,Bieb.}}$



Dianthus puberulus (Sm.) A. Kern.



Dianthus quadrangulus $_{\mathrm{Velen.}}$



Dianthus roseo-luteus Velen.



Dianthus simulans Stoj. & Stef.

2000 $\hat{\mathbf{t}}$ 1000 Bal

Dianthus stenopetalus Griseb.



Dianthus strybrnyi _{Velen.}



Dianthus strymonis



$\hbox{Dianthus superbus}$



Dianthus trifasciculatus



Dianthus tristis Velen.



Dianthus urumoffii

Stoj. & Acht.

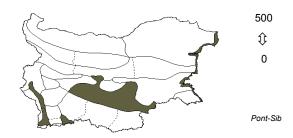


Dichanthium ischaemum

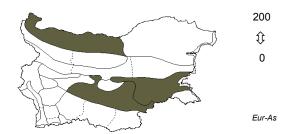
(L.) Roberty



Dichostylis hamulosa (M. Bieb.) Nees



Dichostylis michelianus $_{(L.)\ Nees}$



Dictamnus albus



Digitalis ferruginea



Digitalis grandiflora



Digitalis laevigata Waldst. & Kit.



Digitalis lanata



$\underset{\mathrm{Lindl.}}{\mathsf{Digitalis}} \ \mathsf{viridiflora}$

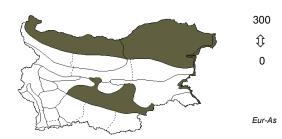


Digitaria ciliaris (Retz.) Koeler.



Digitaria ischaemum

(Schreb.) Muhl.



$\underset{(L.)\;Scop.}{\text{Digitaria sanguinalis}}$



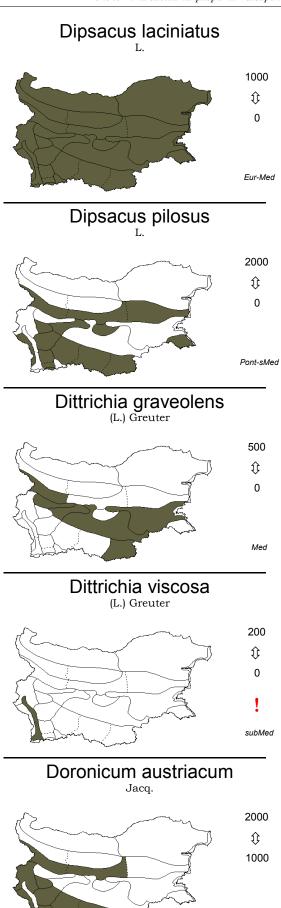
$\underset{(L.) \; \mathrm{Holub}}{\mathsf{Diphasiastrum}} \; \mathsf{alpinum}$



$\underset{(L.)\; Holub}{\mathsf{Diphasiastrum}}\; complanatum$



$\underset{(L.)\ \mathrm{DC.}}{\text{Diplotaxis muralis}}$ 900 **Û** Eur-Med $\underset{(L.)\ \mathrm{DC.}}{\mathsf{Diplotaxis}}\ \underset{(L.)\ \mathrm{DC.}}{\mathsf{tenuifolia}}$ 800 ${\bf \hat{t}}$ 0 Eur-Med $\underset{(L.)\ DC.}{\text{Diplotaxis viminea}}$ 700 $\hat{\mathbf{t}}$ 0 Eur-Med Dipsacus ferox Loisel. 1000 **Û** 0 Med Dipsacus fullonum 1000 **Û** 0 Eur-OT



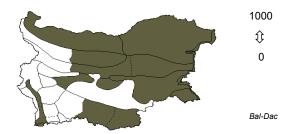
Eur-Med

Doronicum columnae





Doronicum orientale Hoffm.



Dorycnium germanicum (Gremli) Rikli







Draba compacta Schott



Draba korabensis

Kumm. & Degen ex Jav.



Draba lasiocarpa Rochel



Draba muralis



Draba siliquosa

M. Bieb.



Dracocephalum triflorum



Dracunculus vulgaris



Drosera rotundifolia



Dryas octopetala



Dryopteris affinis

(Lowe) Fraser-Jenk.



Dryopteris ambroseae Fraser-Jenk. & Jermi



Dryopteris carthusiana (Vill.) H. P. Fuchs



Dryopteris dilatata (Hoffm.) A. Gray

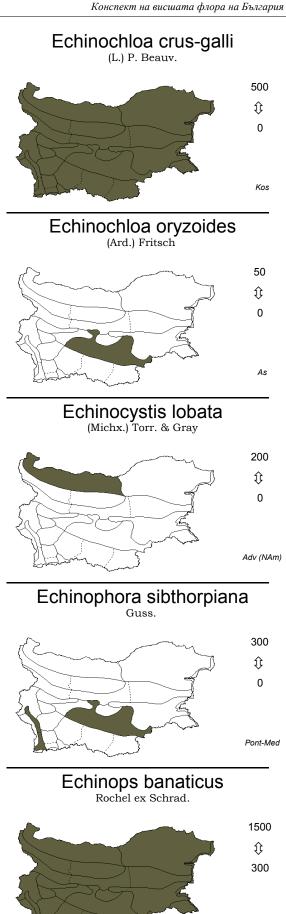


Dryopteris expansa

(C. Presl) Fraser-Jenk. & Jermy

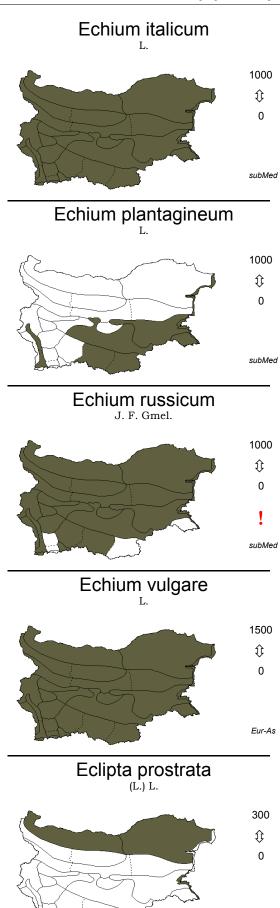


Dryopteris filix-mas (L.) Schott 1800 1); Dryopteris pallida (Bory) Maire & Petitm. 2900 Û 2400 subBoreal Duchesnea indica (Andrews) Focke 300 Û 0 Adv (SAs) Ecballium elaterium (L.) A. Rich. 400 1 0 Med Echinaria capitata (L.) Desf. 500 **Û** 0 Med



subMed

Echinops exaltatus Schrad. 1000 **Û** Echinops microcephallus $_{\mathrm{Sm.}}$ 1000 ${\bf \hat{t}}$ 0 subMed Echinops oxyodontus Bornm. & Diels 700 $\hat{\mathbf{t}}$ 0 Bal Echinops ritro 800 **Û** 0 Eur-Sib Echinops sphaerocephalus 1000 **Û** 0 Eur-Med



Adv (Am)

Edraianthus graminifolius $_{(\mathrm{L.})\;\mathrm{DC.}}$



Edraianthus serbicus (A. Kern.) Petrovič



Elaeagnus angustifolia



Elaeagnus multiflora



Elatine alsinastrum



Elatine ambigua



Elatine triandra Schkuhr



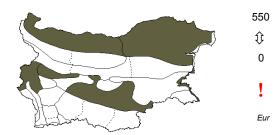
Eleocharis acicularis

(L.) Roem. & Schult.



Eleocharis carniolica

W. Koch



Eleocharis mamillata

Lindb. f.



Eleocharis palustris (L.) R. Br.



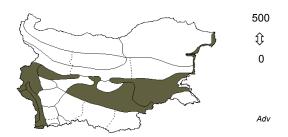
Eleocharis quinqueflora (Hartm.) O. Schwartz



Eleocharis uniglumis (Link) Schult.



Eleusine indica



Eleusine tristachya (Lam.) Lam.



Elodea canadensis



Elodea nuttallii

(Planch.) H. St. John.



Elymus caninus



Elymus elongatus (Host) Runemark

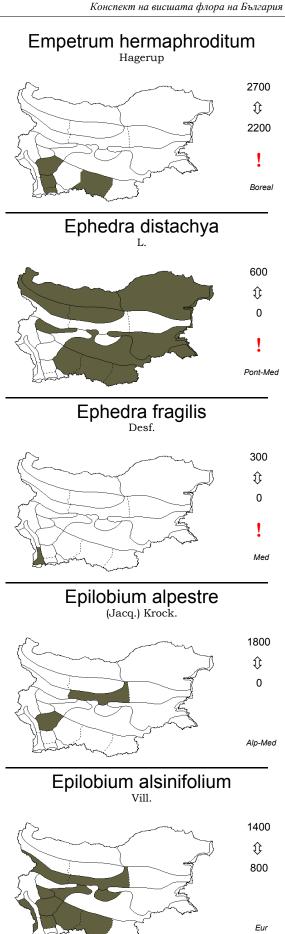
900

Pont-sMed

Elymus farctus (Viv.) Runemark ex Melderis



Elymus hispidus (Opiz) Melderis 1400 **Û** Pont-CAs Elymus panormitanus (Parl.) Tzvelev 1200 **Û** 0 Pont-Med Elymus pycnanthus (Godr.) Melderis 50 Û 0 Med Elymus repens (L.) Gould. 1600 \hat{v} 0 Boreal Elymus varnensis (Velen.) Kožuharov 300 **Û** 0 Pont



Epilobium anagallidifolium Lam.



Epilobium angustifolium $_{\scriptscriptstyle L.}$



Epilobium collinum C. C. Gmel.



Epilobium dodonaei



Epilobium hirsutum



Epilobium lanceolatum

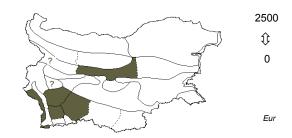
Sebast. & Mauri



${\sf Epilobium} \mathop{\sf montanum}_{\scriptscriptstyle L.}$



Epilobium nutans F. W. Schmidt



Epilobium obscurum Schreb.



Epilobium palustre

2100 ${\bf \hat{v}}$ 500 subBoreal

Epilobium parviflorum Schreb.



Epilobium roseum Schreb.



Epilobium tetragonum $_{\scriptscriptstyle L.}$



Epimedium pubigerum (DC.) Morren & Decne



Epipactis atrorubens (Hoffm.) Besser



Epipactis exilis



Epipactis greuteri H. Baumann & Künkele



Epipactis helleborine

1500

the subBoreal

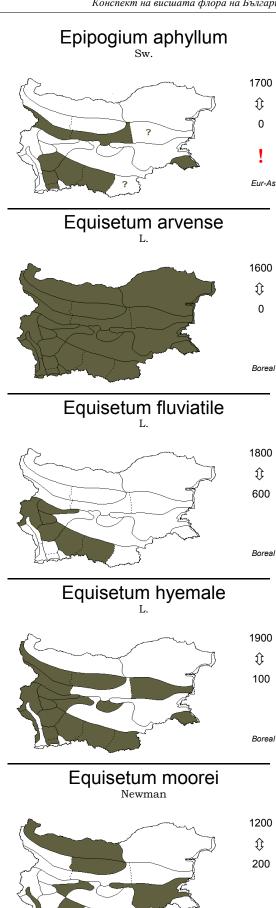
Epipactis leptochila (Godfery) Godfery



Epipactis microphylla (Ehrh.) Sw.

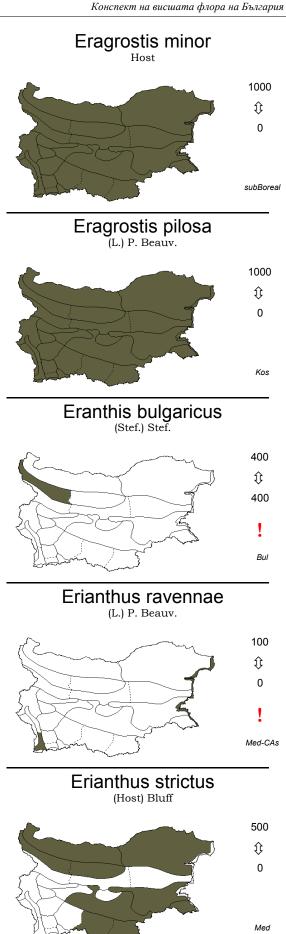


Epipactis palustris (L.) Crantz 1000 \hat{v} subMed Epipactis persica (Sóo) Nannf. 1500 **Û** 0 EEur-Anat Epipactis pontica 1400 $\hat{\mathbf{t}}$ 800 SEur-Anat $\underset{\mathrm{Sm.}}{\mathsf{Epipactis}}\, \mathsf{purpurata}$ 800 1 0 subBoreal **Epipactis spiridonovii** J. Devillers-Tershuren & P. Devillers 2200 $\hat{\mathbf{U}}$ 500 Bal



Hybr

Equisetum palustre 1500 **Û** Equisetum ramosissimum $_{\scriptscriptstyle Desf.}$ 1000 **Û** 0 Boreal $\hbox{Equisetum sylvaticum} \\$ 2000 $\hat{\mathbf{t}}$ 1000 Boreal Equisetum telmateia 1100 **Û** 0 Boreal Eragrostis cilianensis (All.) Vignolo 1000 **Û** 0 Eur-As



Erica arborea 500 $\hat{\mathbf{U}}$ 100 Pont-Med Erigeron acer 2000 **Û** 0 Boreal Erigeron alpinus2500 $\hat{\mathbf{t}}$ 1800 Boreal Erigeron annuus (L.) Pers. 500 \hat{v} 0 Boreal Erigeron atticus 2600 $\hat{\mathbf{U}}$

Конспект на висшата флора на България Erigeron glabratus Hoppe & Hornsch. ex Bluff et Fingerh. 2900 $\hat{\mathbf{t}}$ 1800 Alp-Med $Erigeron \ uniflorus \\ _{L.}$ 2900 ${\bf \hat{t}}$ 2000 Eur-OT Eriolobus trilobata M. Roem. 150 $\hat{\mathbf{t}}$ 150 Med Eriophorum angustifolium Roth 2700 ${\bf \hat{U}}$ 2000 Boreal $\underset{\text{Koch ex Roth}}{\mathsf{Eriophorum}} \ \underset{\text{Koth}}{\mathsf{gracile}}$ 2700 ${\bf \hat{t}}$ 2000

Boreal

1100

Alp-Med

Conspectus of the vascular flora of Bulgaria Eriophorum latifolium Hoppe 2700 \hat{v} 900 Eriophorum vaginatum 2700 Û 2000

Erodium absinthoides Willd.

Eur-As



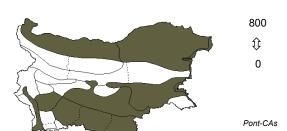
Erodium ciconium (L.) L'Hér.



Erodium cicutarium (L.) L'Hér.



Erodium hoefftianum C. A. Mey.



Erophila verna (L.) Chevall.



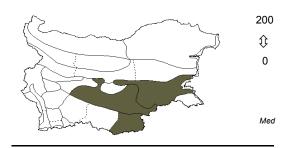
Eruca vesicaria (L.) Cav.

1000 Û 0 Med

Eryngium campestre $_{\scriptscriptstyle L.}$



Eryngium creticum



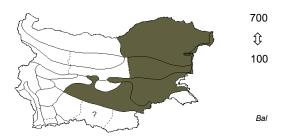
Eryngium maritimum



Eryngium palmatum Pančić & Vis.



Erysimum bulgaricum (Velen.) Ančev & Polatschek



Erysimum cheiranthoides



Erysimum comatum



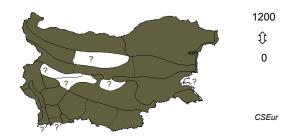
Erysimum crassistylum



$\begin{array}{c} \text{Erysimum cuspidatum} \\ \text{ $_{(M.~Bieb.)}$ DC.} \end{array}$



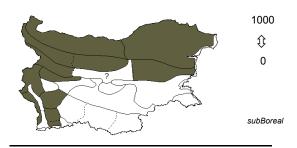
Erysimum diffusum



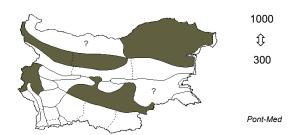
Erysimum drenowskyi Degen

2000 t) 0

Erysimum moesiacum Velen.



Erysimum odoratum



Erysimum pirinicum Ančev & Polatschek



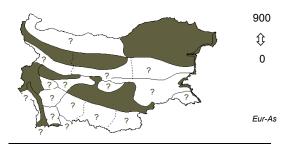
Erysimum pseudoatticum Ančev & Polatschek



Erysimum quandrangulum (L'Hér.) Desf.



Erysimum repandum



Erysimum slavjankae

Ančev & Polatschek



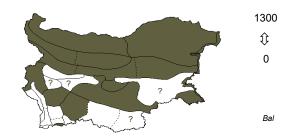
Erysimum sylvestre

(Crantz) Scop.



Erysimum welchevii

Urum.



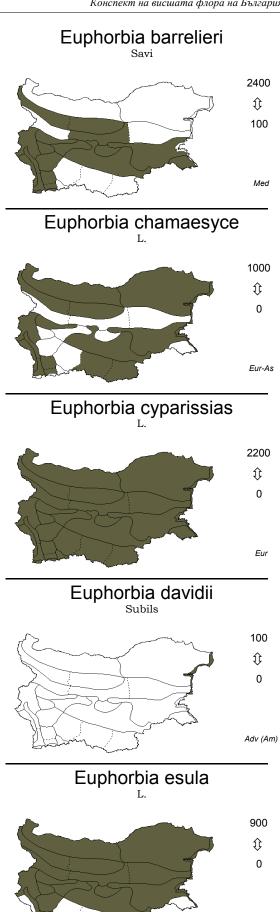
Erythronium dens-canis



$\underset{(L.)\ R.\ \mathrm{Br.}}{\mathsf{Euclidium}} \ \text{syriacum}$



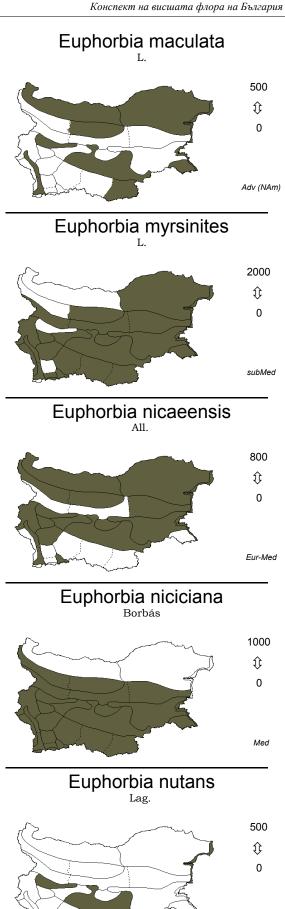
Eupatorium cannabinum 1000 **Û** Euphorbia agraria M. Bieb. 1000 ${\bf \hat{U}}$ 0 subMed Euphorbia aleppica 300 $\hat{\mathbf{t}}$ 0 Med Euphorbia amygdaloides $_{\scriptscriptstyle L.}$ 2400 **Û** 0 Eur Euphorbia apios 900 $\hat{\mathbf{U}}$ 100



Eur-As

subMed

Euphorbia exigua 800 \hat{v} Eur-Med Euphorbia falcata 1200 ${\bf \hat{U}}$ 0 Med-As Euphorbia helioscopia $_{\scriptscriptstyle L.}$ 1300 $\hat{\mathbf{t}}$ 100 Eur-As Euphorbia lathyris 500 **Û** 0 Adv (Jap-Ch) Euphorbia lucida Waldst. & Kit. 150 **Û** 0



Adv (NAm)

Eur-Sib

Euphorbia oblongata Griseb.



$\underset{\scriptscriptstyle L.}{\text{Euphorbia}} \text{ palustris}$



Euphorbia paralias



Euphorbia peplis



Euphorbia peplus



Euphorbia plathyphyllos



Euphorbia polychroma



Euphorbia salicifolia



Euphorbia seguerana $_{\mathrm{Neck.}}$

350 ①
0

Eur-As

Euphorbia serrulata



Euphorbia taurinensis



Euphorbia villosa Waldst. & Kit.



Euphrasia hirtella Jord. ex Reut.



Euphrasia illyrica



Euphrasia liburnica



Euphrasia minima

Jacq. ex DC.



Euphrasia montana

Euphrasia pectinata

Euphrasia picta

2000 th 500

Euphrasia rostkoviana Hayne

Euphrasia salisburgensis $_{\scriptscriptstyle \mathrm{Funck}}$



Euphrasia stricta D. Wolff.



Evonymus europaeus



Evonymus latifolius (L.) Mill.



Evonymus verrucosus



Fagus orientalis



Fagus sylvatica



Falcaria vulgaris



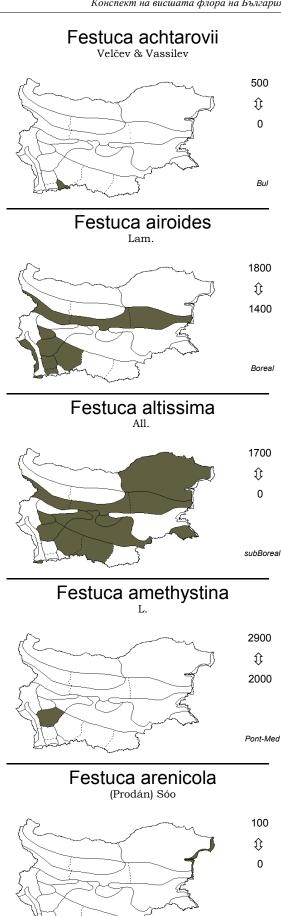
Fallopia aubertii (Louis Henry) J. Holub

1000 t) 0

Fallopia bochemica (Chrtek & Chrtkova) J. P. Baylei

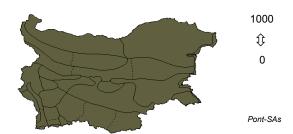


Fallopia japonica (Houtt.) Dene. Û Adv Ferula heuffelii Griseb. 1000 ${\bf \hat{t}}$ 0 Carp-Bal Ferula orientalis 500 $\hat{\mathbf{t}}$ 0 Pont Ferulago campestris (Besser) Grecescu 1200 **Û** 0 Eur-Sib Ferulago sylvatica (Besser) Rchb. 900 **Û** 0 subMed



Pont

Festuca arundinacea Schreb.



Festuca balcanica

(Acht.) Markgr.-Dann.



Festuca callieri

(Hack. ex St-Yves) Markgr.-Dann.



Festuca dalmatica (Hack.) K. Richt.



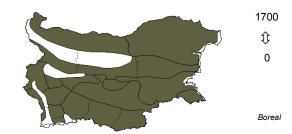
Festuca diffusa Dumort.



Festuca drymeja Mert & Koch



Festuca gigantea (L.) Vill.



Festuca hercegovinica

(Acht.) Markgr.-Dann.



Festuca heterophylla Lam.

1400 ${\bf \hat{t}}$ 0 Boreal

Festuca hirtovaginata (Acht.) Markgr.-Dann.

2000 ${\bf \hat{t}}$ 1700 Bal

Festuca horvatiana

Markgr.-Dann.



Festuca illyrica Markgr.-Dann.



Festuca koritnicensis Vetter ex Hayek

2200 $\hat{\mathbf{t}}$ 2200 Bal

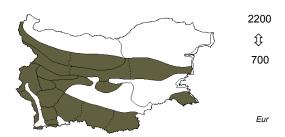
Festuca macedonica Vetter



Festuca maleschevica Velčev & Vassilev



Festuca nigrescens



Festuca oviniformis

Vetter



Festuca panciciana (Hack.) K. Richt.



Festuca paniculata (L.) Schinz & Thell.



Festuca penzesii (Acht.) Markgr.-Dann.



Festuca peristerea

(Vetter) Markgr.-Dann.



Festuca picturata



Festuca pirinensis (Acht.) Acht.



Festuca pirinica Horv. ex Markgr.-Dann.

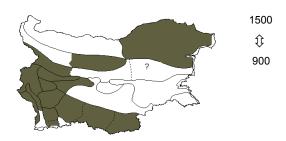


Festuca pratensis



Festuca pseudodalmatica

Krajina ex Domin



Festuca pseudovina Hack. ex Wiesb.



Festuca riloensis

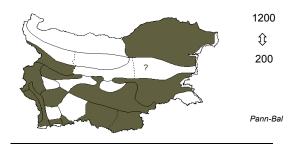
(Hack. ex Hayek) Markgr.-Dann.



Festuca rubra



Festuca rupicola



Festuca spectabilis



Festuca stojanovii (Acht.) Kožuharov



Festuca thracica (Acht.) Markgr.-Dann.



Festuca trichophylla (Duer. ex Gaudin) Richt.



Festuca vaginata Waldst. & Kit. ex Willd.



Festuca valesiaca

Schleich. ex Gaudin



Festuca valida

(Uechtr.) Pénzes



Festuca xanthina

Roem. & Schult.



Festulolium Ioliaceum

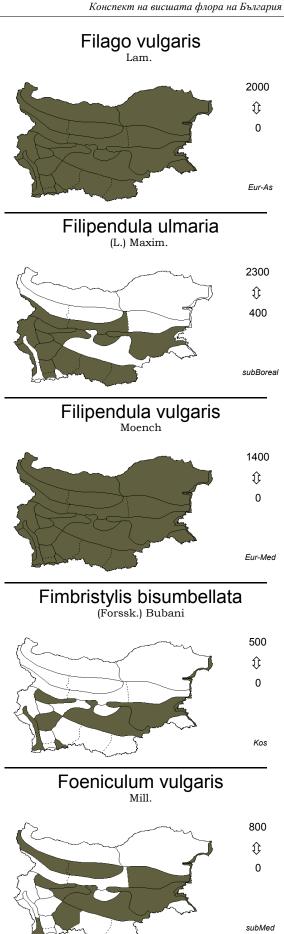
(Hudson) P. Fourn.



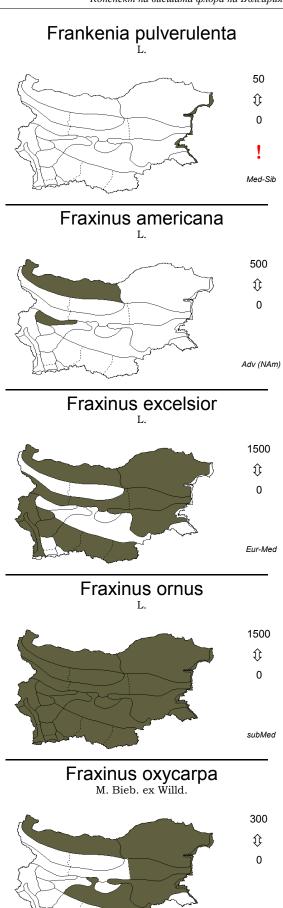
Fibigia clypeata (L.) Medicus



Ficus carica 300 \hat{v} Adv (Med) Filaginella uliginosa 2000 **Û** 0 Boreal Filago eriocephala Guss. 1000 $\hat{\mathbf{t}}$ 0 Boreal Filago lutescens 1800 ${\bf \hat{t}}$ 0 Boreal Filago pyramidata 500 ${\bf \hat{v}}$ 0 Eur



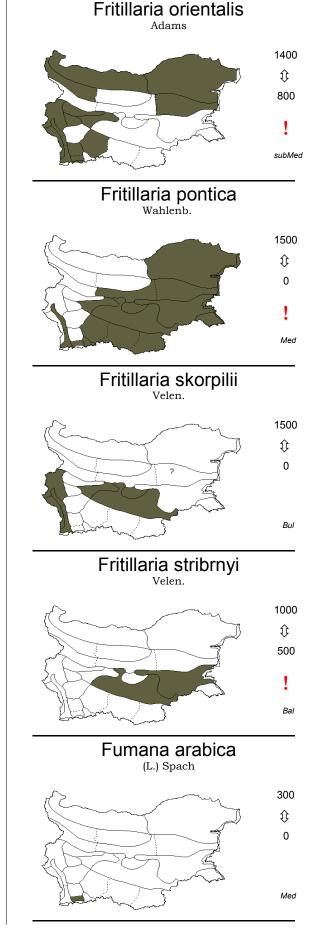
Fragaria moschata Duchesne 2000 **Û** Eur-Pont Fragaria vesca 2000 ${\bf \hat{t}}$ 0 subBoreal Fragaria viridis 1300 $\hat{\mathbf{t}}$ 0 Eur-Sib Frangula alnus 1500 ${\bf \hat{t}}$ 0 subBoreal Frangula rupestris (Scop.) Schur 1500 **Û** 0 Med



Med

Conspectus of the vascular flora of Bulgaria Fraxinus pallisiae Wilmott 300 \hat{v} Pont-Med Fraxinus pennsylvanica 300 **Û** 0 Adv (NAm) Fritillaria drenovskyi Degen & Stoj. 1800 $\hat{\mathbf{t}}$ 1000 Bal Fritillaria gussichiae (Degen & Dörfl.) Rix 1500 $\hat{\mathbf{U}}$

Fritillaria meleagroides
Patrin ex Schult. f.



1000

Bal

700

Û

0

Pont-CAs

Fumana procumbens (Dunal) Gren. & Godr.



Fumaria densiflora



Fumaria kralikii Jord.



Fumaria officinalis



Fumaria parviflora



Fumaria petteri



Fumaria rostellata

Knaf



Fumaria schleicheri

Soy.-Will.



Fumaria schrammii

(Asch.) Velen.



Fumaria thuretii

Boiss.



Fumaria vaillantii



Gagea arvensis (Pers.) Dumort.



Gagea bohemica (Zauschn.) Schult. & Schult. f.



Gagea chrysantha (Jan.) Schult. & Schult. f.

300 Û 0

Gagea fistulosa (Ramond ex DC.) Ker Gawl.



Gagea fragifera

(Vill.) E.Bayer & G.Lo pez



Gagea lutea (L.) Ker Gawl.



Gagea minima (L.) Ker Gawl.



Gagea peduncularis (J. & C. Presl) Pascher



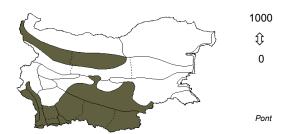
Gagea pratensis

(Pers.) Dumort.



Med

Gagea pusilla (F. W. Schmidt) Schult. & Schult. f.



Gagea reticulata (Pall.) Schult. & Schult. f.



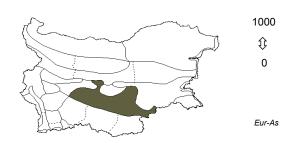
Gagea saxatilis (Mert & Koch) Schult. et Schult. f.



Gagea taurica



Gagea villosa (M. Bieb.) Duby



Galanthus elwesii

Hook. f.



Galanthus nivalis



Galega officinalis



Galeopsis angustifolia Ehrh. ex Hoffm.



Galeopsis bifida

Boenn.



$\text{Galinsoga parviflora} \\ \text{$^{\text{Cav.}}$}$ Galeopsis ladanum 1000 1600 Û **Û** 0 Eur-As Adv (SAm) Galeopsis speciosa Galium aegaeum (Stoj. & Kitanov) Ančev 2000 1100 ${\bf \hat{U}}$ Û 0 0 Eur-As Bal Galeopsis tetrahit Galium album 2000 2000 Û Û 0 0 Eur-As Eur-As Galium anisophyllon Vill. Galilea mucronata (L.) Parl. 2900 0 ${\bf \hat{U}}$ \hat{v} 0 1600 Med Alp-Carp Galinsoga ciliata (Raf.) S. F. Blake Galium aparine 1000 1500 Û **Û** 0 0 Adv (SAm) Eur-As

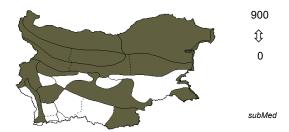
Galium asparagifolium Boiss. & Heldr.



Galium boreale



Galium debile Desv.



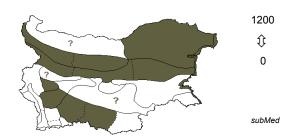
Galium demissum Boiss.



Galium divaricatum Pourret ex Lam.



$\underset{\scriptscriptstyle{C.\,Presl}}{\text{Galium elongatum}}$



Galium flavescens

Borbás



Galium glaucum



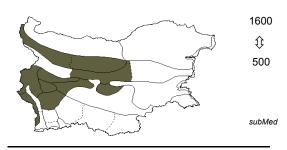
Galium humifusum

M. Bieb.



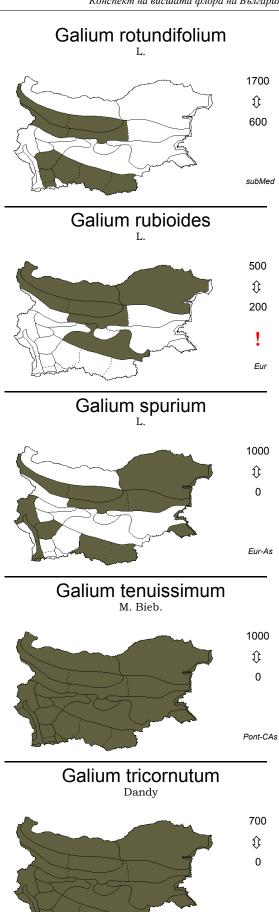
Galium intermedium

Mérat



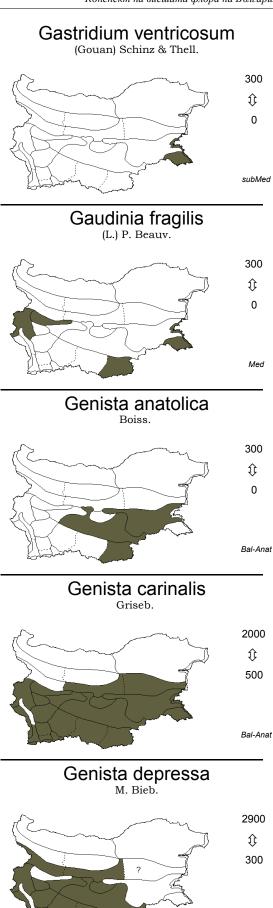
Galium lovcense Galium odoratum (L.) Scop. 1700 2000 ${\bf \hat{U}}$ Û 200 0 Bal-Anat Eur-As $\hbox{Galium palustre}$ Galium lucidum 1500 1900 \hat{v} ${\bf \hat{t}}$ 200 0 subMed Boreal Galium parisiense Galium macedonicum Krendl 1200 500 \hat{v} $\hat{\mathbf{t}}$ 400 250 Bal Eur-Med Galium paschale Forssk. Galium mirum Rech. f. 1000 900 ${\bf \hat{U}}$ \hat{v} 250 0 Bal Bal-Anat Galium octonarium Galium pomeranicum (Klokov) Sóo Retz. 900 1500 Û **Û** 0 0 Med-CAs Hybr

Galium procurrens Ehrend. 1400 ${\bf \hat{t}}$ 650 Galium pseudoaristatum Schur 1300 \hat{v} 150 Pann-Bal Galium rhodopeum Velen. 1450 $\hat{\mathbf{t}}$ 300 Bal Galium rigidifolium 1200 ${\bf \hat{t}}$ 300 Bal Galium rivale (Sm.) Griseb. 1500 **Û** 0 Pont-Sib



Eur-As

Galium uliginosum 1500 Û 500 Eur-As Galium velenovskyi Ančev 600 \hat{v} 250 Bul Galium verticillatum Danth. ex Lam. 1400 Û 0 Med-As Galium verum 1700 ${\bf \hat{t}}$ 0 Eur-As $\underset{\mathrm{Pobed.}}{\mathsf{Galium}} \ volhynicum$



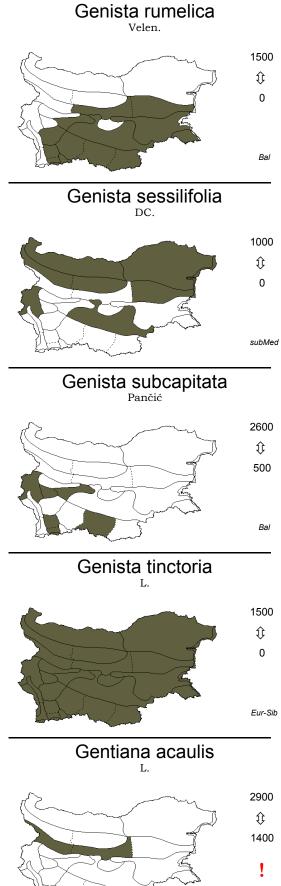
subMed

500

0

Pont

Genista germanica 1600 **Û** 0 Genista januensis 1600 ${\bf \hat{U}}$ 0 subMed Genista lydia 900 $\hat{\mathbf{t}}$ 100 Bal-Anat Genista ovata Waldst. & Kit. 1500 ${\bf \hat{U}}$ 0 Eur Genista pilosa 2000 $\hat{\mathbf{U}}$ 500 Eur



Eur

Gentiana asclepiadea

2900

Gentiana cruciata



Gentiana frigida



Gentiana lutea



Gentiana nivalis



Gentiana pneumonanthe



Gentiana punctata



Gentiana pyrenaica



Gentiana utriculosa



Gentiana verna

2900 that the state of the sta

Gentianella amarella

(L.) Börner



Gentianella bulgarica (Velen.) Holub

2500 1 800

Pont

Gentianella ciliata



Gentianella crispata (Vis.) Holub



Gentianella engadinensis (Wettst.) Holub



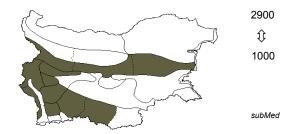
Gentianella germanica

(Willd.) Börner



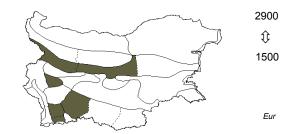
Gentianella lutescens

(Velen.) Holub



Gentianella praecox

(A. & J. Kern.) Dostál



Geranium aristatum

Freyn. & Sint.

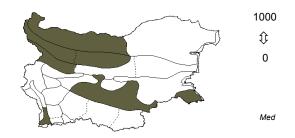


Geranium asphodeloides

Geranium bohemicum



Geranium brutium Gasp.



Geranium coeruleatum



Geranium columbinum



Geranium dissectum



Geranium divaricatum



Geranium lucidum



Geranium macrorrhizum

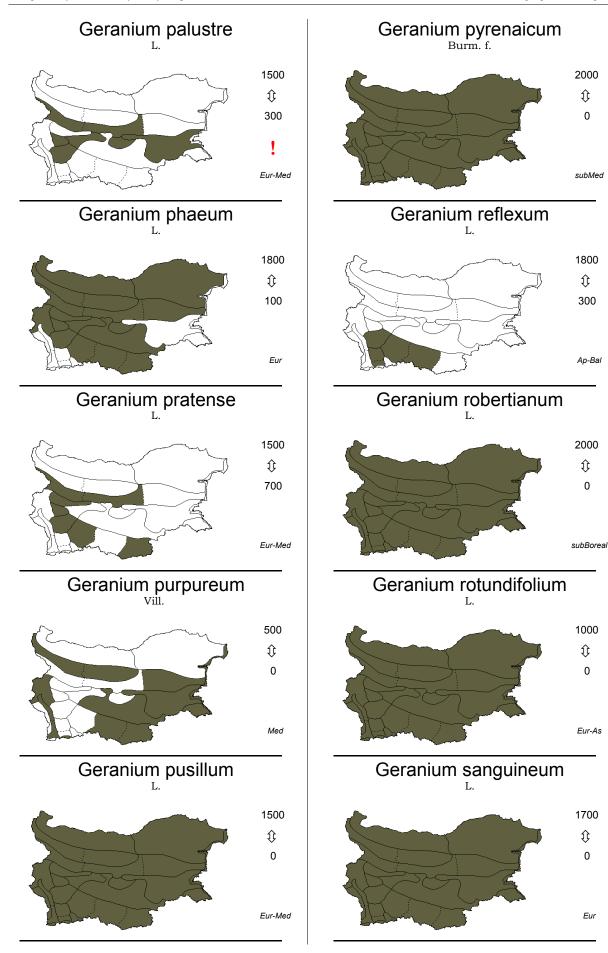
2500 t) 300

Geranium macrostylum Boiss.

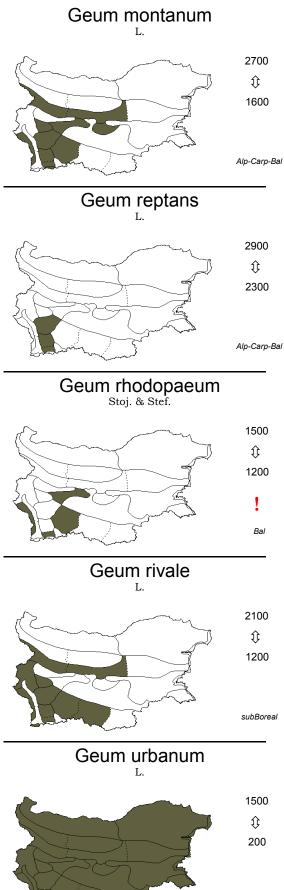


Geranium molle

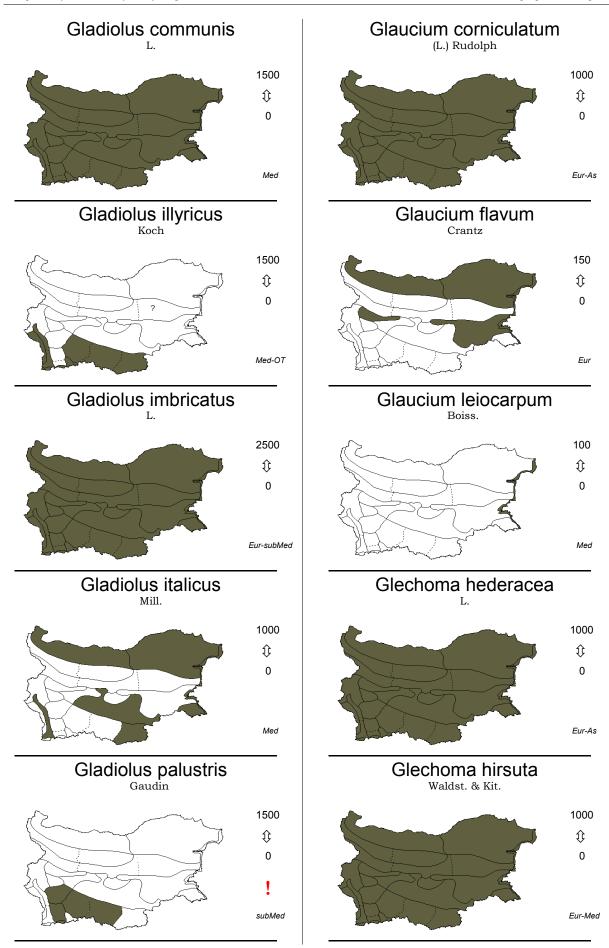




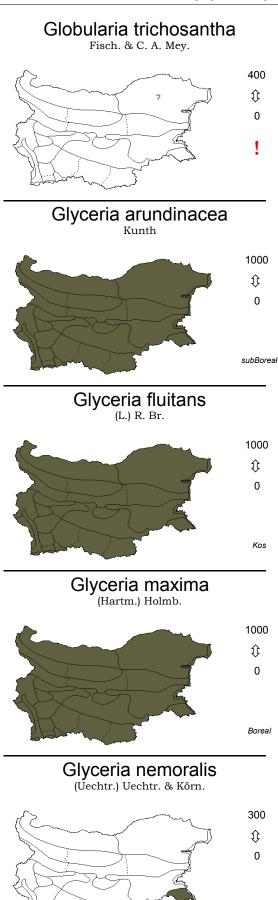
$Geranium \underset{\scriptscriptstyle L.}{\text{sylvaticum}}$ 2200 \hat{v} 1000 Geranium tuberosum 800 ${\bf \hat{t}}$ 0 subMed Geum bulgaricum 2800 $\hat{\mathbf{t}}$ 2000 Bal Geum coccineum 2300 ${\bf \hat{t}}$ 900 subMed Geum molle Vis. & Pančić 1800 $\hat{\mathbf{U}}$ 1000 Ap-Bal



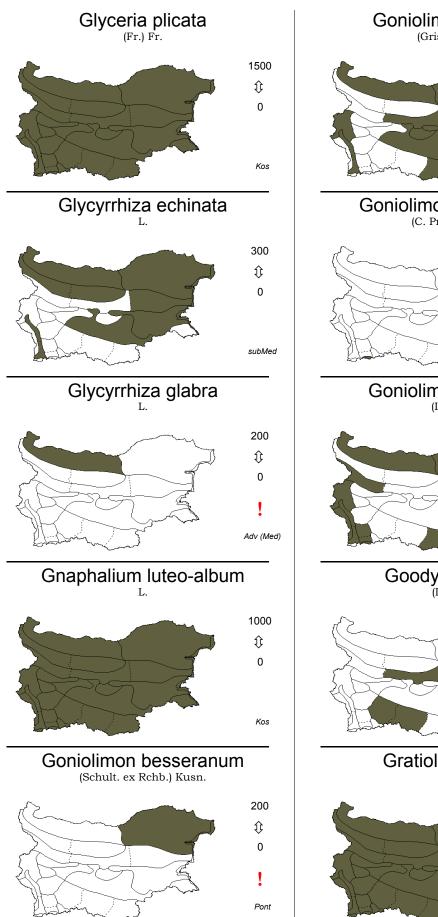
subBoreal

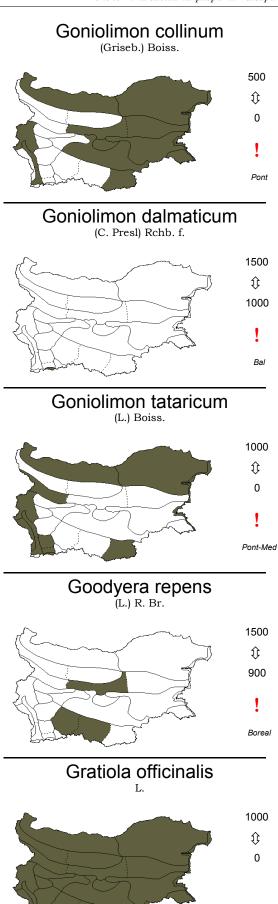


Gleditsia triacanthos 1000 **Û** Adv (NAm) Glinus lotoides 200 **Û** 0 Med-CAs Globularia aphyllanthes 2200 Û 0 Eur Globularia cordifolia 2800 $\hat{\mathbf{U}}$ 300 Alp-Carp-Anat Globularia meridionalis (Podp.) Schwarz **Û**



CEur





Eur-Med

Groenlandia densa

(L.) Fourr.



Gymnadenia conopsea (L.) R. Br.



Gymnadenia densiflora (Wahllenb.) A. Dietr.



Gymnadenia frivaldii Hampe ex Griseb.



$\underset{(L.)\; Newman}{\textbf{Gymnocarpium dryopteris}}$

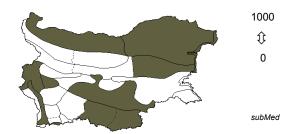


Gymnocarpium robertianum

(Hoffm.) Newman



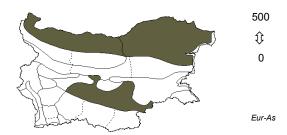
Gypsophila glomerata Pall. ex M. Bieb.



Gypsophila muralis

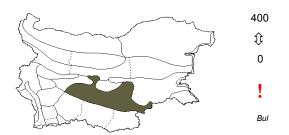


Gypsophila paniculata



Gypsophila petraea (Baumg.) Rchb.

2900 ${\bf \hat{t}}$ 1800 Carp



Gypsophila trichotoma $_{\mathrm{Wend.}}$



$\label{eq:haberlearhodopensis} \textit{Haberlea rhodopensis} \\ \textit{\tiny Friv.}$



Hainardia cyllindrica (Willd.) Greuter



Halimione pedunculata (L.) Aellen



Halimione portulacoides (L.) Aellen



Hammarbya paludosa (L.) Kuntze



Haplophyllum balcanicum Vandas

2900 \hat{v} 1000 Bal

$\underset{(\mathrm{DC.})\ \mathrm{G.\ Don}}{\text{Haplophyllum suaveolens}}$

1200 ${\bf \hat{t}}$ 0 Med

Haplophyllum thesioides (Fisch.ex DC.) G. Don



Hedera helix



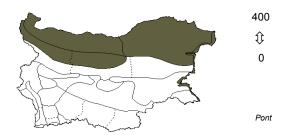
Hedypnois cretica (L.) Dum. Cours.



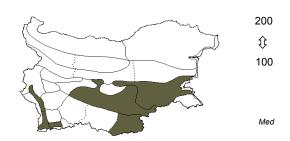
$\label{eq:hedysarum} \textbf{Hedysarum grandiflorum} \\ \text{$^{\text{Pall.}}$}$



Hedysarum tauricum Pall. ex Willd.



$\begin{tabular}{ll} Helianthemum & aegyptiacum \\ (L.) & Mill. \end{tabular}$



Helianthemum lasiocarpum Desf. ex Willk.



Helianthemum nummularium (L.) Mill.



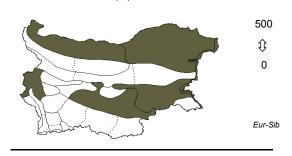
$Helian the mum salici folium \\ {}_{(L.)~Mill.}$



Helianthus tuberosus

1000 It 0

Helichrysum arenarium (L.) Moench



$\underset{\mathrm{DC.}}{\text{Helichrysum plicatum}}$



$\underset{\text{De Not.}}{\text{Heliotropium dolosum}}$



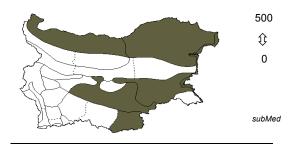
Heliotropium europaeum



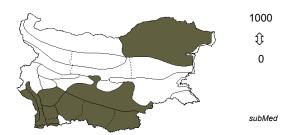
$\underset{\mathrm{M.\ Bieb.}}{\mathsf{Heliotropium\ suaveolens}}$



Heliotropium supinum



Helleborus cyclophyllus (A. Braun) Boiss.



Helleborus odorus

Waldst. & Kit.



Hepatica nobilis



Heptaptera triquetra (Vent.) Tutin



Heracleum angustisectum

(Stoj. & Acht.) Peev



Heracleum sibiricum



Heracleum ternatum



Heracleum verticillatum



Herminium monorchis (L.) R. Br.



Herniaria glabra



Herniaria hirsuta



Herniaria incana



Herniaria nigrimontium



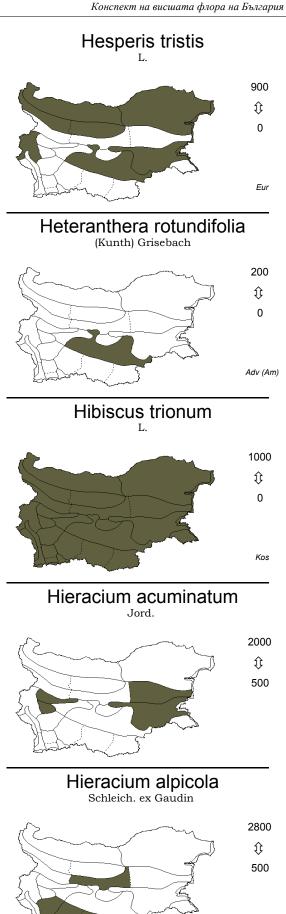
Herniaria olympica

1700 1700 1700

Herniaria parnassica Heldr. & Sart. ex Boiss.



$\underset{\mathrm{Beck}}{\mathsf{Hesperis}} \ \text{dinarica}$ 2500 \hat{v} 1500 Hesperis laciniata 1300 ${\bf \hat{t}}$ 0 subMed Hesperis matronalis $_{\scriptscriptstyle L.}$ 1000 Û 0 Med Hesperis sylvestris 1000 \hat{v} 0 Eur Hesperis theophrasti 500 **Û** 0 Bal



Alp-Carp-Bal

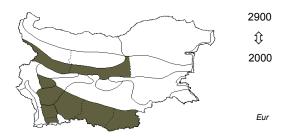
Hieracium ancevii Szelag



Hieracium asenovgradense Jasiewicz & Pawł.



Hieracium aurantiacum



Hieracium banaticola Sudre



Hieracium belogradcense T. Georg. & Kitanov



Hieracium biflorum

Arv. - Touv.



Hieracium brachiatum

Bertol. ex Lam.



Hieracium caespitosum

Dumort.



${\rm Hieracium}_{\rm L.} {\rm cymosum}$



Hieracium densiflorum



Hieracium divaricatum



Hieracium divergens Naeg. & Peter



Hieracium djimilense Boiss. & Balansa



Hieracium dolopicum Freyn & Sint.



Hieracium echioides Lumn.



$\label{eq:Hieracium erythrocarpum} \begin{subarray}{c} Hieracium erythrocarpum \\ \begin{subarray}{c} Peter \end{subarray}$

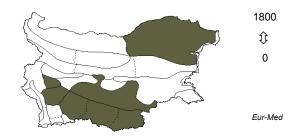


Hieracium ferdinandii-regis



Hieracium florentinoides

Arvet - Tow.



Hieracium gentile Jord. ex Boreau



Hieracium gregorii-bakurianii S. Bräut.



Hieracium grizebachii



Hieracium halimifolium Froel ex Fr.



Hieracium heldreichii



Hieracium heterogynum (Froel.) Gut.



Hieracium heuffelii



Hieracium hoppeanum Schult.



Hieracium jankae



Hieracium kittaniae



Hieracium klisurae



Hieracium laevigatum Willd.



Hieracium latifolium

Froelich ex Link



Hieracium laurinum

Arvet - Tow.



Hieracium leithneri

(Heldr. & Sart. ex Boiss.) Zahn



Hieracium maculatum



Hieracium marmoreum Pančić & Vis.



Hieracium marotii

T. Georg. & Zahn



Hieracium mattffeldianum

Zahn



Hieracium medschedsense

Zahn



Hieracium merxmulleranum

S. Bräut.



Hieracium muricellum

Griseb.



Hieracium naegelianum Pančić

2800 \hat{v}



Hieracium neodivergens Gottschl.



Hieracium nipholasum T. Georg. & Zahn



$\begin{array}{c} \text{Hieracium olympicum} \\ {}_{\text{Boiss.}} \end{array}$



Hieracium ossaeum Zahn



Hieracium oxyodon



$\underset{\mathrm{Boiss.}}{\mathsf{Hieracium}} \ \mathsf{pannosum}$



Hieracium pavichii



Hieracium petrovae Vladimir. & Szelag



Hieracium pilosella



Hieracium piloselloides



$\label{eq:hierarcium_pilosissimum} \mbox{Hieracium pilosissimum}_{\mbox{\sc Friv.}}$



Hieracium pirinicola T. Georg. & Zahn



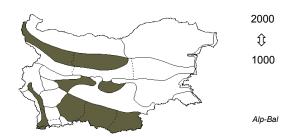
Hieracium praealtum Vill. ex Goch.



Hieracium praecox _{Sch.Bip.}



$\underset{v_{uk.}}{\text{Hieracium praecurrens}}$



${\hbox{Hieracium pseuderiopus}\atop {\tt Zahn}}$



Hieracium pseudopilosella



Hieracium racemosum Waldst. & Kit.

1800 t) 1000 Eur-Med

Hieracium retyezatense



Hieracium ruprechtii



Hieracium sabaudum



Hieracium sartorianum Boiss.



Hieracium scardicum Bornm. & Zahn

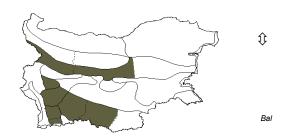


Hieracium schmidtii Tausch



Hieracium schultzianum

Pančić & Vis.



Hieracium semisilvaticum

(Zahn) P. D. Sell



$\underset{\text{Nejceff}}{\mathsf{Hieracium}} \ \underset{\text{Nejceff}}{\mathsf{sericophyllum}}$

2900 \hat{v} 1500

Bal-Anat

$\underset{Friv.}{\text{Hieracium sparsum}}$



Hieracium stefanoffii



$\label{eq:Hieracium tephrocephalum} \begin{subarray}{c} Hieracium tephrocephalum \\ $v_{uk.}$ \end{subarray}$



Hieracium tommassinii Rchb.



Hieracium transylvanicum Heuff.



Hieracium trebevicianum K. Maly



Hieracium tschamkorijense



Hieracium umbellatum



Hieracium urumoffii

Nejceff & Zahn



Hieracium vandasii

Frein.



Hieracium velenovskyi Freyn



Hieracium villosum



Hieracium virosum



Hieracium werneri



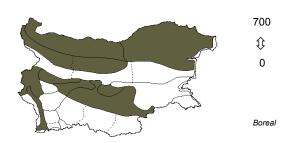
Hieracium wolffii



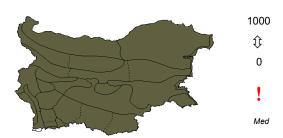
Hierochloe australis (Schrad.) Roem. & Schult.



Hierochloe repens (Host) Simonk.



Himantoglossum caprinum (M. Bieb.) Spreng.



Hippocrepis ciliata



Hippocrepis comosa



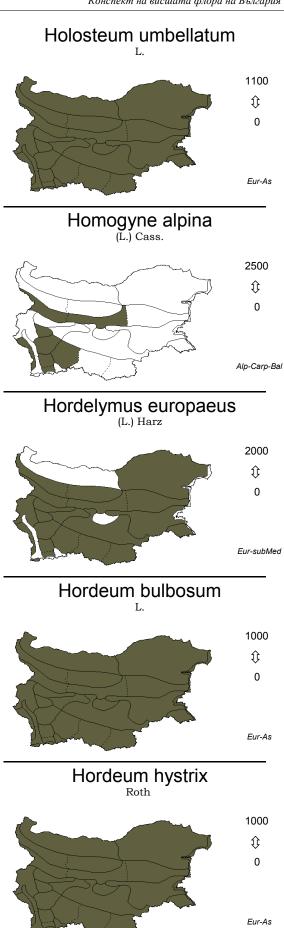
Hippocrepis unisiliquosa



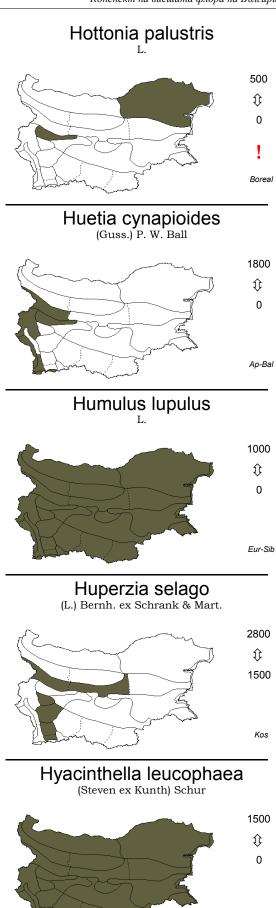
Hippomarathrum cristatum (DC.) Boiss.



Hippophae rhamnoides 0 **Û** Hippuris vulgaris 500 ${\bf \hat{t}}$ 0 Boreal Holcus lanatus 1500 Û 0 Eur Holcus mollis 1400 **Û** 0 Eur Holoschoenus vulgaris Link 1800 **Û** 0 Eur-As

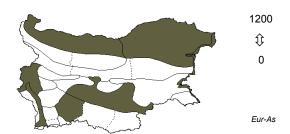


$Hordeum\ leporinum \\ {}_{\rm Link}$ 1000 **Û** Med-CAs Hordeum marinum Huds. 500 **Û** 0 Med-CAs Hordeum murinum 1000 Û 0 Boreal Hordeum secalinum Schreb. 1000 \hat{v} 0 Boreal Hornungia petraea (L.) Reichenb. 800 **Û** 0 Eur-subMed



Pont-Med

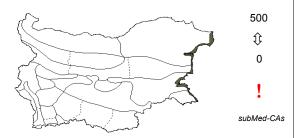
Hydrocharis morsus-ranae



Hymenocarpus circinatus (L.) Savi



Hymenolobus procumbens (L.) Nutt.



Hyoscyamus albus $_{\scriptscriptstyle L.}$



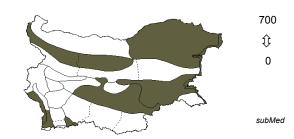
Hyoscyamus niger



Hypecoum imberbe



$Hypecoum_{\stackrel{L.}{\longrightarrow}} pendulum$



$\begin{array}{c} \text{Hypecoum ponticum} \\ \text{}_{\text{Velen.}} \end{array}$



$\hbox{Hypecoum procumbens} \\$



Hypericum androsaemum



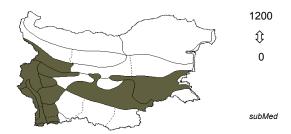
Hypericum annulatum



Hypericum aucheri Jaub. & Spach



Hypericum barbatum Jacq.



Hypericum boissieri Petrovič



Hypericum calycinum

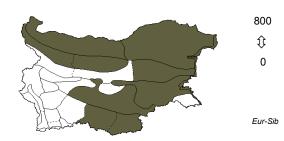


Hypericum cerastoides

(Spach) N. Robson



Hypericum elegans Stephan ex Willd.



Hypericum hirsutum



Hypericum hyssopifolium



Hypericum linarioides



Conspectus of the vascular flora of Bulgaria Hypericum maculatum 2000 \hat{v} Hypericum montbretii 1800 **Û** 0 subMed Hypericum olympicum 1500 $\hat{\mathbf{t}}$ 300 subMed $\hbox{Hypericum perforatum} \\$ 2000 \hat{v} 0 Kos Hypericum richeri

Hypericum rochelii Griseb. & Schenk 1000 Û 0 Bal-Dac $\begin{array}{c} \text{Hypericum rumeliacum} \\ \text{\tiny Boiss.} \end{array}$ 1000 ${\bf \hat{t}}$ 0 subBal $\hbox{Hypericum setiferum} \\ {\scriptstyle \text{Stef.}}$ 900 Û 0 Bul $\label{eq:hypericum} \text{Hypericum tetrapterum} \\ \text{$_{Fr.}$}$ 1000 ${\bf \hat{v}}$ 0 Eur-Sib Hypericum thasium Griseb. 1000 **Û** 0

Bal

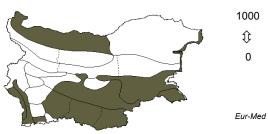
1000

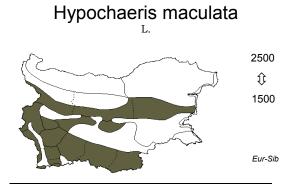
Û

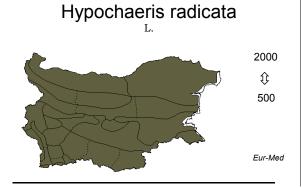
0

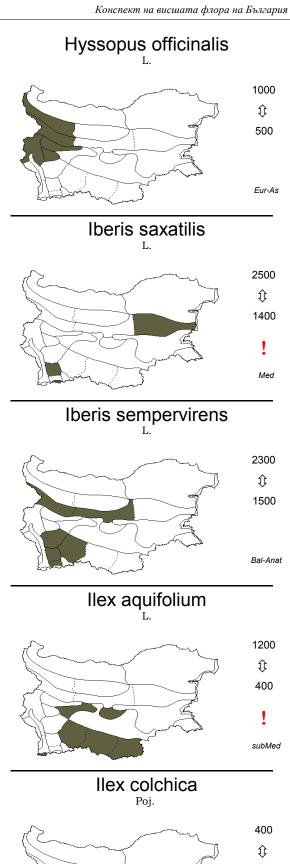
subMed

Conspectus of the vascular flora of Bulgaria Hypericum umbellatum 1000 **Û** subBal Hypochaeris cretensis (L.) Bory & Chaub. 1000 ${\bf \hat{t}}$ 0 Med Hypochaeris glabra 1000









Impatiens balfourii



Impatiens glandulifera Royle



Impatiens noli-tangere



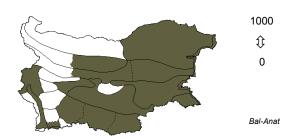
$\underset{\mathrm{DC.}}{\mathsf{Impatiens}}\, \mathsf{parviflora}$



Imperata cylindrica



Inula aschersoniana



Inula bifrons $_{\rm (L.)\ L.}$



Inula britannica

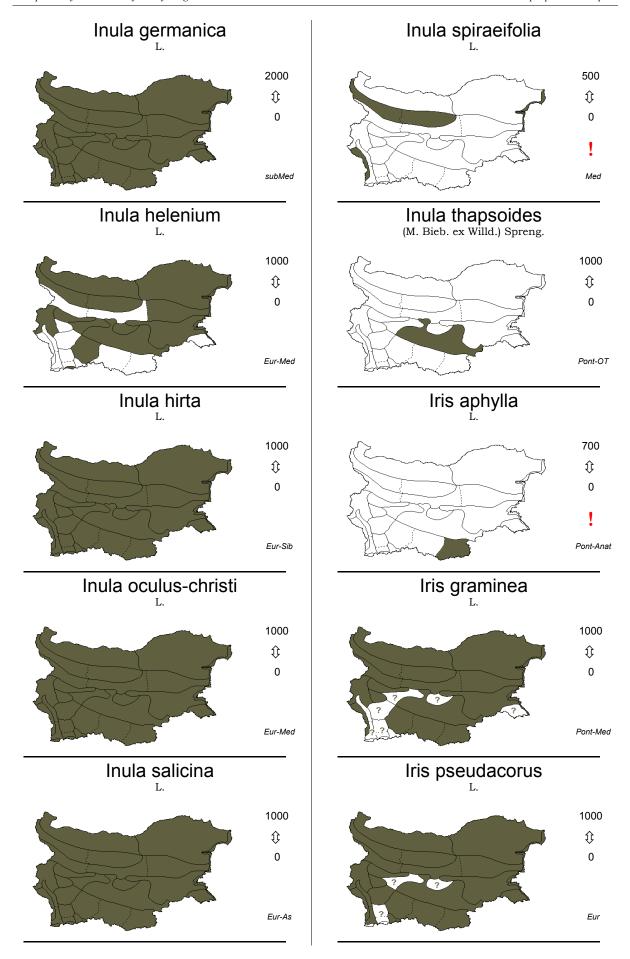


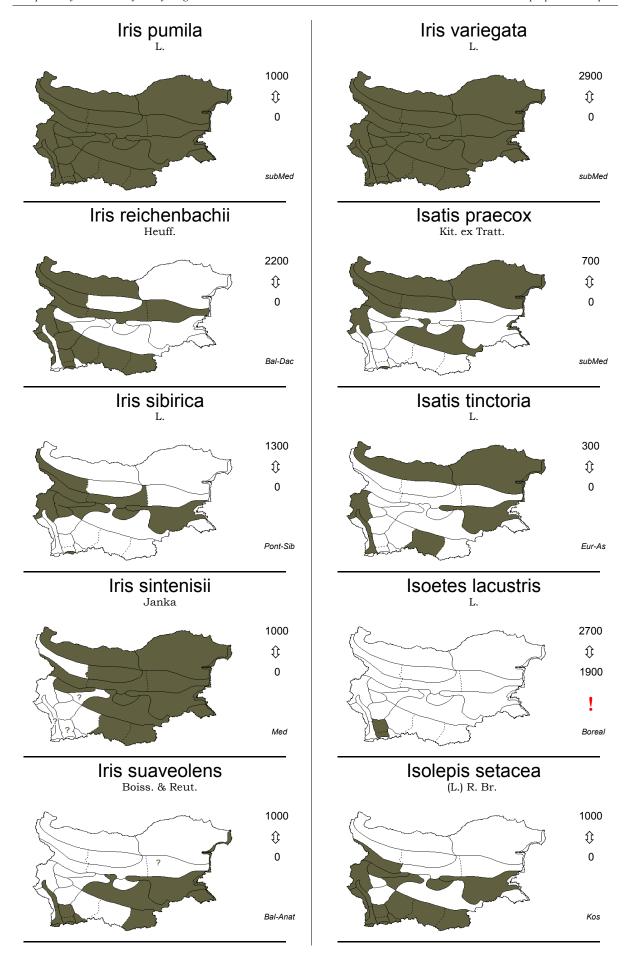
Inula conyza



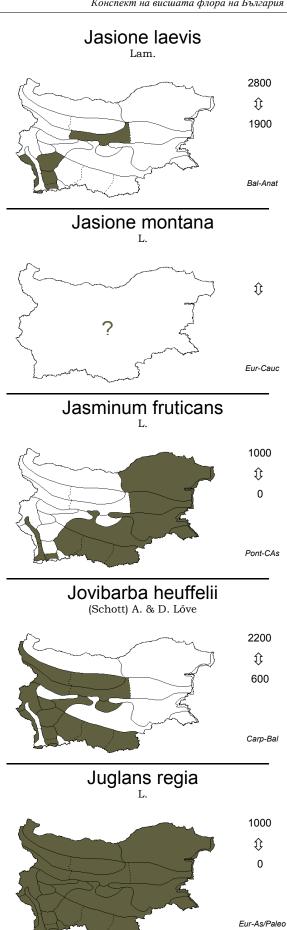
Inula ensifolia

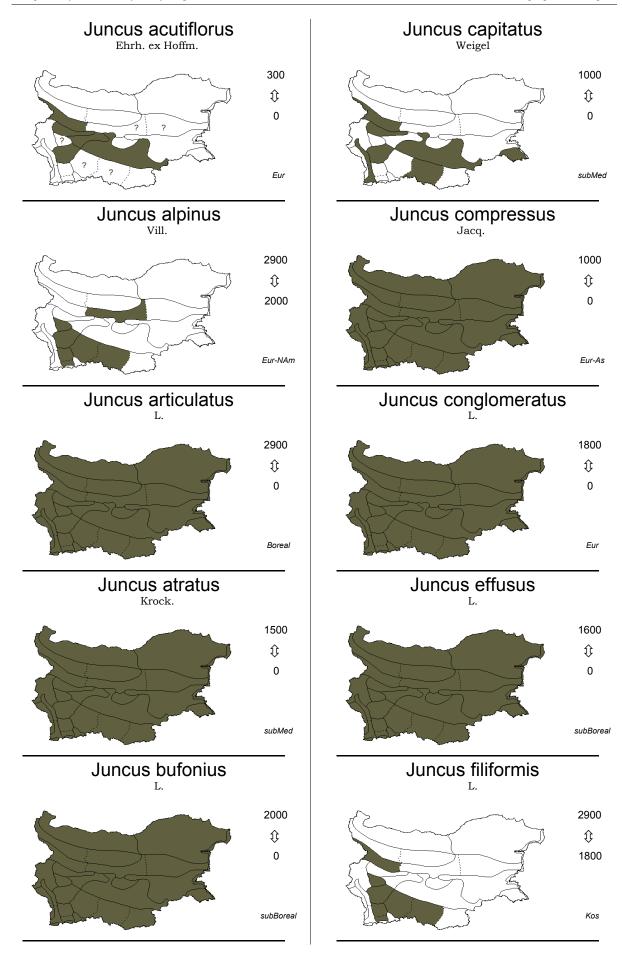






Isolepis supina (L.) R. Br. 100 **Û** Isopyrum thalictroides 1200 **Û** 0 Eur Iva xanthifolia 500 $\hat{\mathbf{t}}$ 0 Adv (NAm) Jasione bulgarica Stoj. & Stef. 2700 $\hat{\mathbf{U}}$ 1900 Bul Jasione heldreichii Boiss. & Orph. 1500 **Û** 0 Eur-Med





500

Û 0

Eur

1000

 ${\bf \hat{t}}$

0

1000

Û

0

Eur-Sib

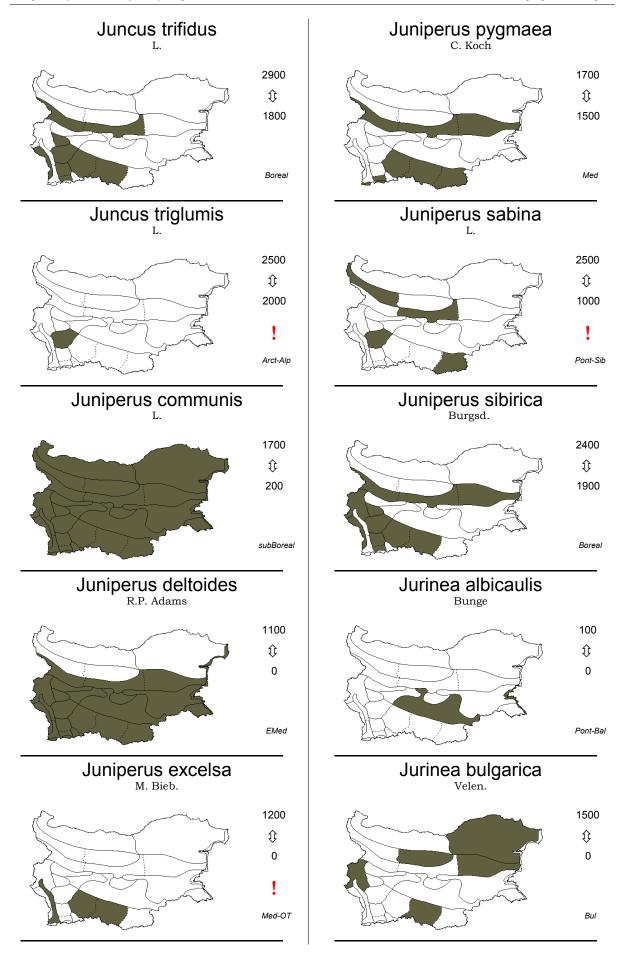
 ${\bf \hat{t}}$

0

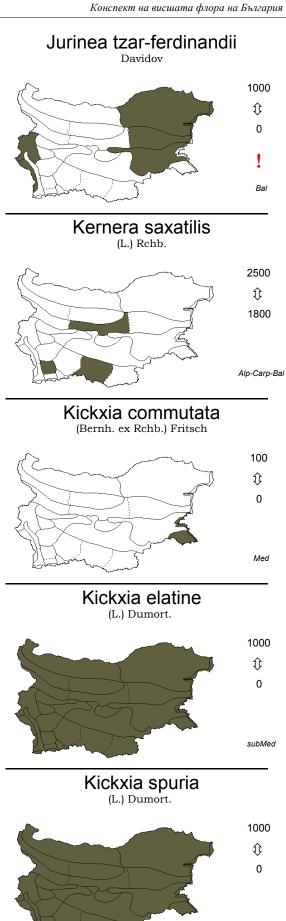
Û

400

Juncus gerardii Juncus ranarius Song. & Perr. ex Bill. 700 **Û** Juncus hybridus Juncus subnodulosus Schrank 400 **Û** 0 Med subMed Juncus inflexus Juncus tenageia 1500 $\hat{\mathbf{t}}$ 0 subBoreal Juncus littoralis Juncus tenuis C. A. Mey. Willd. 300 1500 **Û** 0 ОТ Adv (NAm) Juncus maritimus Juncus tomasii 2500 200 **Û** 0 Kos Carp-Bal



Jurinea consanguinea DC. 2000 **Û** 0 subMed-Sib Jurinea glicacantha (Sm.) DC. 1500 Û 1000 Pann-Bal Jurinea ledebourii Bunge 500 $\hat{\mathbf{t}}$ 0 Pont Jurinea mollis (L.) Rchb. 2400 **Û** 0 Pont-Med Jurinea stoechadifolia (M. Bieb.) DC. 200 **Û** 0 Pont-Bal



subMed

Knautia ambigua (Friv.) Boiss. & Orph.



Knautia arvensis (L.) Coult.



Knautia byzantina Fritsch



Knautia degenii Borbás ex Formánek



Knautia dinarica (Murb.) Borbás



Knautia drymeia



Knautia integrifolia (L.) Bertol.



Knautia macedonica

Griseb.

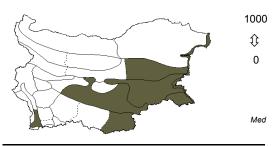


Knautia midzorensis

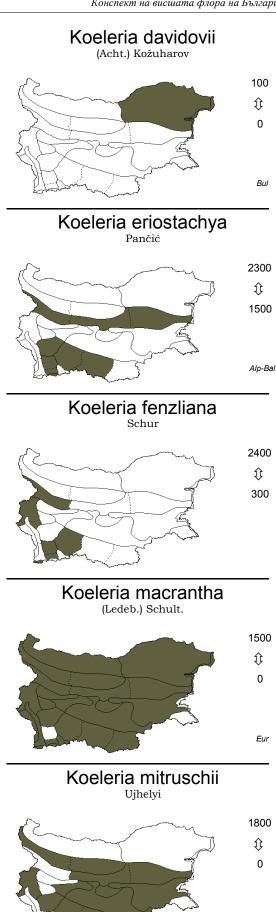
Formánek



Knautia orientalis



Kobresia myosuroides (Vill.) Fiori 2700 Û 2100 Arct-Alp Kochia laniflora (S. G. Gmel.) Borbás 350 ${\bf \hat{t}}$ 0 Pont-Sib Kochia prostrata (L.) Schrad. 300 $\hat{\mathbf{t}}$ 0 Eur-As Kochia scoparia (L.) Schrad. 1000 \hat{v} 0 Adv Koeleria brevis Steven 300 **Û** 0



Pont-Med

1300

Û

Bal

800 \$

0

Adv (As)

1000

 $\hat{\mathbf{t}}$

200

Bal-Dac

1000 ‡

0

Eur

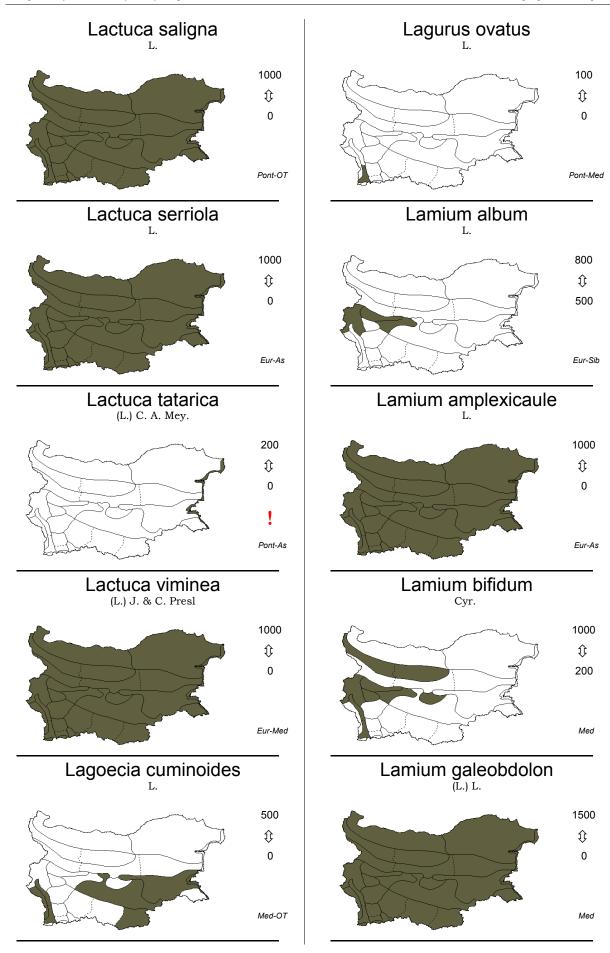
2900

Û

0

Eur

Koeleria nitidula Koeleria simonkaii Adamović 900 **Û** Koelreuteria paniculata Laxm. Koeleria obscura (Velen.) Kožuharov 600 ${\bf \hat{t}}$ 0 Pont-Med Koeleria penzesii _{Ujhelyi} Lactuca aurea (Sch.Bip. ex Pančić) Stebbins 1400 $\hat{\mathbf{t}}$ 0 Koeleria pyramidata (Lam.) P. Beauv. Lactuca perennis 2200 Û 1800 subMed Lactuca quercina Koeleria schurii Ujhelyi 1000 **Û** 0



Lamium garganicum



Lamium maculatum



Lamium moshcatum



Lamium purpureum



Lappula barbata (M. Bieb.) Gürke



Lappula marginata (M. Bieb.) Gürke



Lappula squarrosa (Retz.) Dumort.

Lapsana communis

2000 ①

0

Eur-Sib

Laser trilobum

1400 ♀
0

Eur-Med

$\underset{\text{Wulfen}}{\textbf{Laserpitium archangelica}}$



2000 ‡

0

Eur-As

2500

 ${\bf \hat{t}}$

1500

Bal

800

Û

0

Eur-As

1000 ‡

0

subBoreal

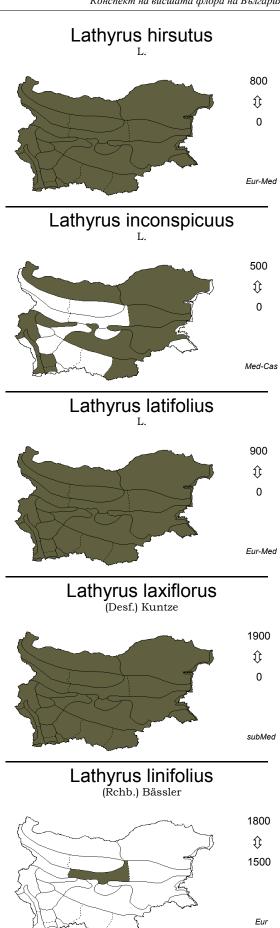
600 \$

0

Eux

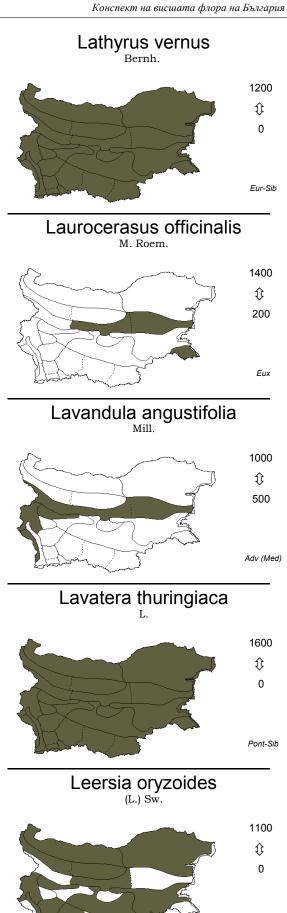
Laserpitium krapfii Lathraea squamaria 2100 $\hat{\mathbf{U}}$ 1000 Alp-Carp-Bal Laserpitium latifolium Lathyrus alpestris (Waldst. & Kit.) Kit. ex Čelak. 1600 \hat{v} 1100 subMed Laserpitium prutenicum Lathyrus annuus 1400 Û 0 Eur-Med Laserpitium siler Lathyrus aphaca 1800 $\hat{\mathbf{U}}$ 1000 subMed Lathraea rhodopea Lathyrus aureus Dingl. (Steven) Brândză 1650 $\hat{\mathbf{U}}$ 200 Bal

Lathyrus cicera 800 \hat{v} subMed Lathyrus digitatus (M. Bieb.) Fiori 800 **Û** 0 Med Lathyrus filiformis (Lam.) Gay 1750 $\hat{\mathbf{t}}$ 1250 Med Lathyrus grandiflorus 1300 ${\bf \hat{t}}$ 100 Med-Anat Lathyrus hallersteinii Baumg. 1000 ${\bf \hat{v}}$ 0 SEur



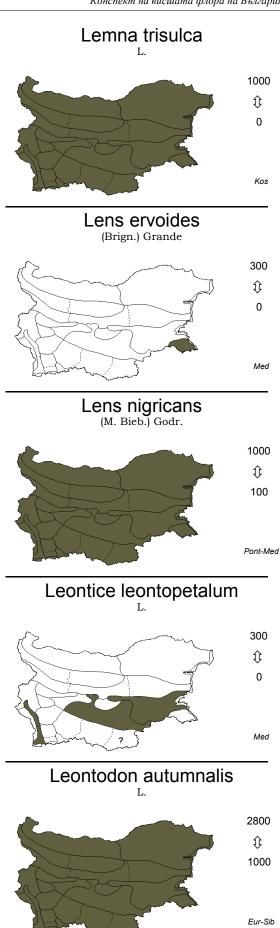
Lathyrus pannonicus Lathyrus niger (L.) Bernh. (Jacq.) Garcke 1200 800 Û \hat{v} 0 0 Eur-Med subMed-Sib Lathyrus nissolia Lathyrus pratensis 1000 1500 **Û** ${\bf \hat{t}}$ 0 0 Eur-subMed subBoreal Lathyrus pallescens (M. Bieb.) C. Koch Lathyrus sativus 1000 800 $\hat{\mathbf{t}}$ Û 0 0 subMed subMed Lathyrus palustris Lathyrus saxatilis (Vent.) Vis. 1100 200 \hat{v} ${\bf \hat{t}}$ 0 0 Eur-As Med Lathyrus pancicii (Jurišić) Adamović Lathyrus setifolius 700 800 **Û Û** 0 0 Bal Pont-Med

Lathyrus sphaericus Retz. 1000 **Û** Lathyrus sylvestris 800 **Û** 0 Eur-subMed Lathyrus transsilvanicus (Spreng.) Fritsch 1600 $\hat{\mathbf{t}}$ 0 Carp-Bal Lathyrus tuberosus 1000 \hat{v} 0 Eur-As Lathyrus venetus (Mill.) Wohlf. 1500 **Û** 0 Eur-Med



subBoreal

Legousia pentagonia (L.) Thell. 500 $\hat{\mathbf{U}}$ 100 Legousia speculum-veneris (L.) Chaix 1000 **Û** 0 Eur-Med $\underset{(L.)\ Griseb.}{\textbf{Lembotropis nigricans}}$ 1000 Û 0 Eur-Med Lemna gibba 300 \hat{v} 0 Kos Lemna minor 1000 **Û** 0



Kos

Leontodon cichoraceus

(Ten.) Sanguin.



Leontodon crispus



Leontodon hispidus



Leontodon rilaensis Hayek



Leontodon saxatilis Lam.



Leontodon tuberosus



Leontopodium alpinum Cass.



Leonurus cardiaca



Leonurus marrubiastrum



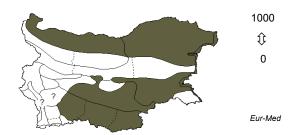
$\underset{(L.)\ R.\ Br.}{\text{Lepidium campestre}}$



Lepidium graminifolium $_{\scriptscriptstyle L.}$



Lepidium latifolium



Lepidium perfoliatum



Lepidium ruderale



Lepidium sativum



Lepidium spinosum



Lepidotrichum uechtritzianum (Bornm.) Velen.



Lerchenfeldia flexuosa

(L.) Schur



Leucanthemella serotina

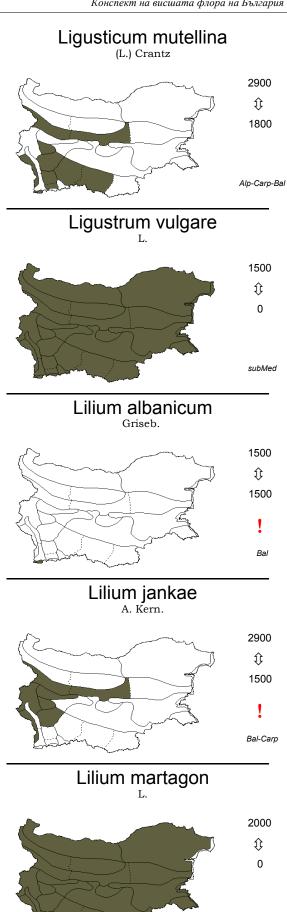
(L.) Tzvelev



Leucanthemum pallens (Gay) DC.



Leucanthemum vulgare 2000 **Û** Eur-Sib Leucojum aestivum $_{\scriptscriptstyle L.}$ 300 ${\bf \hat{t}}$ 0 Eur Leymus racemosus (Lam.) Tzvelev Û 0 Pont-Sib Ligularia glauca 2000 Û 1600 Carp-Bal-Alp Ligularia sibirica 1000 **Û** 0



Eur-As

Eur-Sib

$\underset{\mathrm{Delip.}}{\mathsf{Lilium}} \ \text{rhodopaeum}$



Limodorum abortivum (L.) Schwarz



Limonium asterotrichum

(Salmon) Salmon



Limonium bulgaricum Ančev



Limonium gmelinii (Willd.) Kuntze



Limonium latifolium

(Sm.) Kuntze



Limonium meyeri (Boiss.) Kuntze



$\underset{_{Mill.}}{\text{Limonium}} \ \text{vulgare}$



Limosella aquatica



Linaria angustissima (Loisel.) Borbás



1800 ‡

600

Bal-Anat

1000

 ${\bf \hat{t}}$

0

Med

850

Bal

800 \$

100

Med

1800

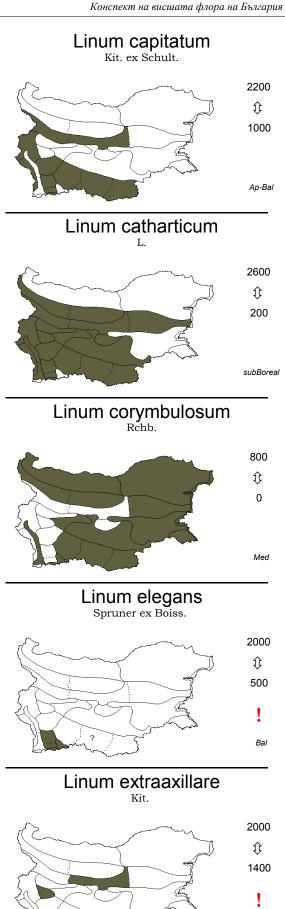
Û

0

Eur-Sib

Linaria grandiflora $_{\mathrm{Desf.}}$ Linaria arvensis (L.) Desf. 500 \hat{v} subMed Linaria brachyphylla Delip. Linaria pelisseriana 1700 Û 1500 Bul Linaria chalepensis Linaria rubioides Vis. & Pančić 700 $\hat{\mathbf{t}}$ 150 Med Linaria simplex (Willd.) DC. Linaria dalmatica (L.) Mill. 1800 **Û** 0 Med Linaria genistifolia Linaria vulgaris 1800 **Û** 0 Pont-Sib

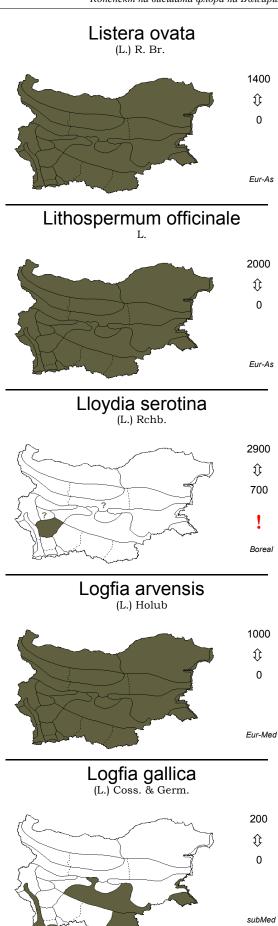
Lindernia dubia (L.) Pennell 500 **Û** Adv (NAm) Lindernia procumbens (Krock.) Philcox 1000 **Û** 0 Eur-As $\underset{\mathrm{Jacq.}}{\mathsf{Linum}} \ \text{alpinum}$ 2900 $\hat{\mathbf{t}}$ 1400 Alp-Med Linum austriacum 1000 \hat{v} 0 subMed Linum bienne 700 **Û** 0 Med



Carp-Bal

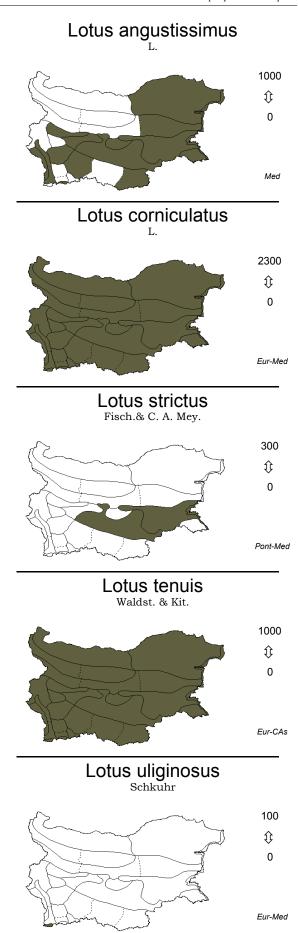
$\underset{\scriptscriptstyle{L.}}{\text{Linum flavum}}$ Linum pallasianum Schult. 200 1600 Û **Û** 0 subMed Pont Linum hirsutum Linum spathulatum (Halacsy & Bald.) Halascy 1700 400 ${\bf \hat{U}}$ ${\bf \hat{t}}$ 0 0 subMed Linum strictum $\underset{\text{Rchb.}}{\text{Linum hologynum}}$ 2000 300 $\hat{\mathbf{t}}$ $\hat{\mathbf{t}}$ 600 0 Med-OT subMed Linum tauricum Linum nervosum Waldst. & Kit. 1300 1400 ${\bf \hat{v}}$ Û 100 0 subMed Pont-Med Linum nodiflorum Linum tenuifolium 1600 700 Û **Û** 0 0 Med Pont-Med

Linum thracicum (Griseb.) Degen 1000 Û 200 Bal Linum trigynum 900 ${\bf \hat{t}}$ 0 subMed Linum uninerve (Rochel) Borbás 1600 $\hat{\mathbf{t}}$ 1000 Pont Liparis loeselii (L.) Rich. 500 1 0 Boreal Listera cordata (L.) R. Br. 1600 $\hat{\mathbf{U}}$ 1000 ! Boreal



Lolium rigidum Gaudin Logfia minima (Sm.) Dumort. 1000 1000 **Û** Û 0 0 Eur-Sib Med-As Lolium temulentum Lolium Ioliaceum (Bory & Chaub.) Hand.-Mazz. 100 1500 ${\bf \hat{t}}$ ${\bf \hat{t}}$ 0 0 Boreal Pont-Med Lolium multiflorum Lonicera caerulea Lam. 800 1700 $\hat{\mathbf{t}}$ $\hat{\mathbf{t}}$ 0 900 subMed Alp-Med $Lolium \underset{\scriptscriptstyle L.}{perenne}$ Lonicera etrusca Santi 1800 700 ${\bf \hat{U}}$ ${\bf \hat{t}}$ 0 0 Eur-As Med Lolium remotum Lonicera nigra Schank 1900 1000 Û **Û** 0 900 Eur-As Alp-Bal

Lonicera xylosteum 1700 **Û** Eur-Sib Lophochloa cristata (L.) Hyl. 500 ${\bf \hat{t}}$ 0 Med Loranthus europaeus Jacq. 1500 Û 0 Pont-Med Lotononis genistoides (Fenzl) Benth. 1000 **Û** 0 Med Lotus aegaeus (Griseb.) Boiss. 1000 **Û** 0



Med

Conspectus of the vascular flora of Bulgaria Ludwigia palustris (L.) Elliott 400 \hat{v} Eur-NAm Lunaria annua 1300 ${\bf \hat{t}}$ 0

Lunaria rediviva

Med



Lupinus albus



Lupinus angustifolius



Lupinus graecus Boiss. & Spruner



$Lupinus \underset{\rm Lindl.}{polyphyllus}$



Luzula alpino-pillosa (Chaix) Breistr.

2900 $\hat{\mathbf{t}}$ 2200

Arct-Alp

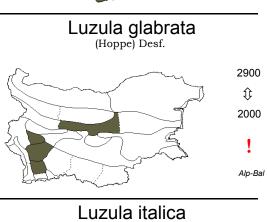




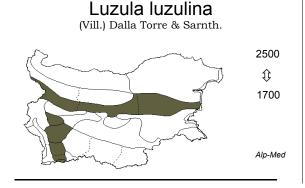
Luzula divulgata Kirschner

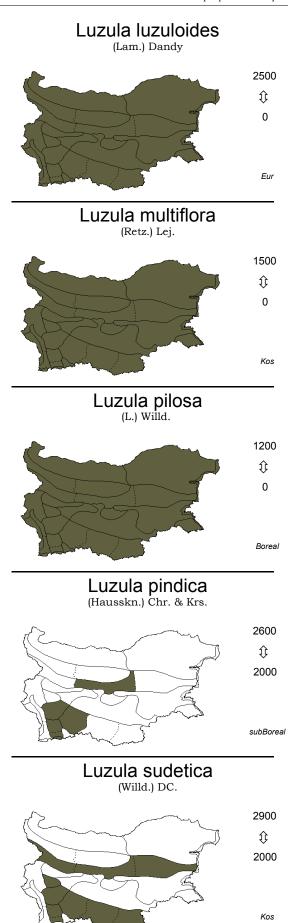


Conspectus of the vascular flora of Bulgaria Luzula falax Kirschner **Û** Luzula forsteri (Sm.) DC. 1500 ${\bf \hat{t}}$ 0 Boreal Luzula glabrata (Hoppe) Desf.







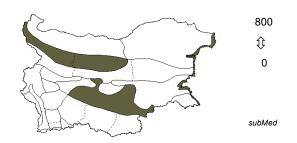


Lycopodiella inundata (L.) Holub Luzula sylvatica (Hudson) Gaudin 1600 1900 ${\bf \hat{U}}$ ${\bf \hat{t}}$ 300 1200 Eur-NAm Lycopodium clavatum Lychnis coronaria (L.) Desr. 1500 2200 **Û** ${\bf \hat{t}}$ 0 1600 Med-OT Kos Lychnis flos-cuculi $_{\scriptscriptstyle \mathrm{L.}}$ Lycopsis arvensis 1400 1000 $\hat{\mathbf{t}}$ Û 0 0 Eur-Sib Eur-As Lychnis subintegra (Hayek) Turrill Lycopus europaeus 1500 1000 ${\bf \hat{v}}$ \hat{v} 0 0 Eur-As Bal Lycium barbarum Lycopus exaltatus 1000 500 ${\bf \hat{v}}$ **Û** 0 0 Adv (Med) Eur-As

Lysimachia atropurpurea



Lysimachia dubia



Lysimachia nummularia



Lysimachia punctata $_{\scriptscriptstyle L.}$



Lysimachia thyrsiflora



Lysimachia vulgaris



Lythrum hyssopifolia



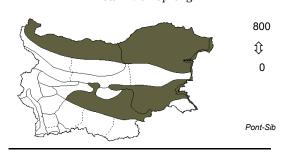
Lythrum salicaria



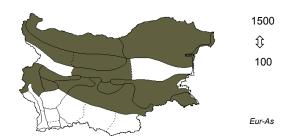
Lythrum thymifolia



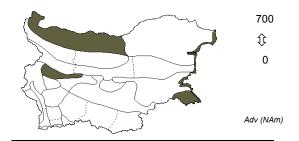
Lythrum tribracteatum Salzm. ex Spreng.



$Lythrum \underset{\scriptscriptstyle L.}{\text{virgatum}}$



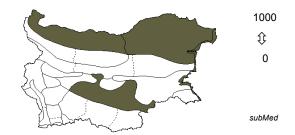
Mahonia aquifolium (Pursh) Nutt.



Malabayla aurea (Sm.) Boiss.



Malabayla graveolens (M. Bieb.) Hoffm.



Malcolmia africana (L.) R.Br.



Malcolmia orsiniana (Ten.) Ten.



Malus dasyphylla Borkh.



Malus praecox (Pall.) Borkh.



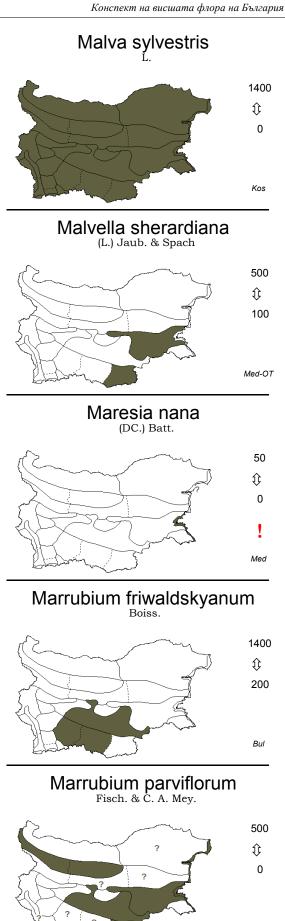
Malus sylvestris



$\underset{\scriptscriptstyle L.}{\text{Malva alcea}}$



Malva crispa 1000 **Û** 1000 Adv (Jap-Ch) Malva moschata 2000 **Û** 400 subMed Malva neglecta Wallr. 1500 **Û** 0 subMed Malva nicaeensis 200 Û 0 subMed Malva pusilla 1000 **Û** 0



Med

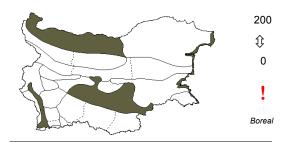
Marrubium peregrinum



$\underset{\scriptscriptstyle{L.}}{\text{Marrubium vulgare}}$



Marsilea quadrifolia



Matricaria caucasica (Willd.) Poir.



Matricaria chamomilla



Matricaria discoidea



Matricaria perforata



Matricaria trichophylla (Boiss.) Boiss.

1000 Û
0

Matthiola fruticulosa (L.) Maire

1300 ♀ 0 subMed

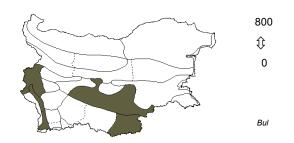
Matthiola odoratissima (M. Bieb.) R. Br.



Medicago arabica (L.) Huds.



Medicago bondevii Kožuharov



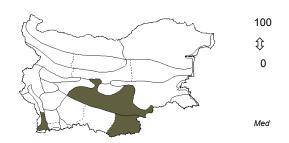
$\underset{\mathrm{Wulfen}}{\text{Medicago carstiensis}}$



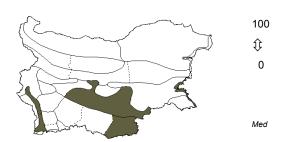
Medicago constricta



Medicago coronata (L.) Bartal.



$\underset{\mathrm{DC.}}{\mathsf{Medicago}}\,\underset{\mathsf{DC.}}{\mathsf{disciformis}}$



$\underset{\scriptscriptstyle L.}{\text{Medicago falcata}}$



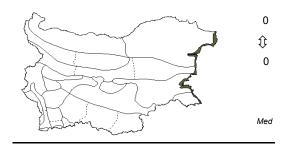
Medicago littoralis Rihde ex Loisel.



${\sf Medicago}_{\scriptscriptstyle L.} {\sf Iupulina}$



$\underset{\scriptscriptstyle{L.}}{\text{Medicago marina}}$



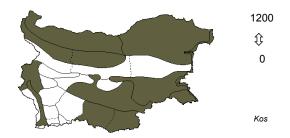
Medicago minima (L.) Bartal.



Medicago orbicularis



Medicago polymorpha



$\underset{\mathrm{DC.}}{\mathsf{Medicago}}\,\mathsf{praecox}$



$\underset{\mathrm{Velen.}}{\mathsf{Medicago}}\, \underset{\mathrm{Velen.}}{\mathsf{rhodopea}}$



Medicago rigidula



Medicago sativa



$\underset{\scriptscriptstyle L.}{\text{Melampyrum arvense}}$



$\underset{\mathrm{A.\ Kern.}}{\text{Melampyrum bihariense}}$



Melampyrum cristatum



Melampyrum pratense



$\underset{\text{Wettst.}}{\text{Melampyrum scardicum}}$



$\underset{\scriptscriptstyle{L.}}{\text{Melampyrum sylvaticum}}$



Melica altissima



Melica ciliata



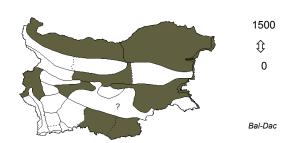
Melica nutans



Melica picta



Melica transsilvanica



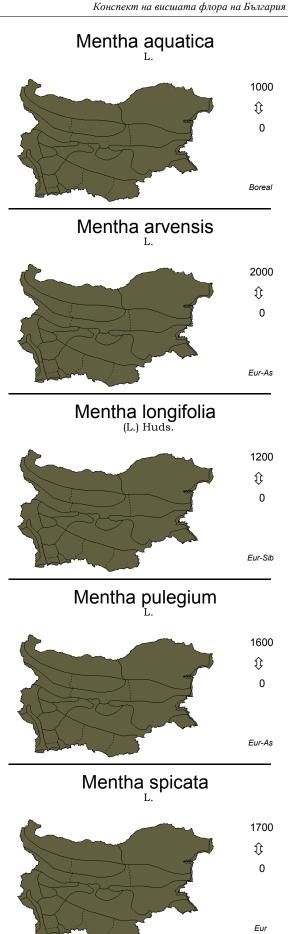
Melica uniflora



Melilotus alba



Melilotus indica 300 **Û** Med-CAs $\ \, \text{Melilotus neapolitana} \\ \ \, \text{$_{\text{Ten.}}$} \\$ 300 Û 0 subMed $\underset{(L.) \ Pall.}{\text{Melilotus officinalis}}$ 1000 Û 0 Eur-As Melissa officinalis 1200 **Û** 0 subMed $\underset{\scriptscriptstyle L.}{\text{Melittis melissophyllum}}$ 1500 **Û** 0 Eur



$\underset{\mathrm{Ehrh.}}{\mathsf{Mentha}} \ \underset{\mathrm{Ehrh.}}{\mathsf{suaveolens}}$



Menyanthes trifoliata



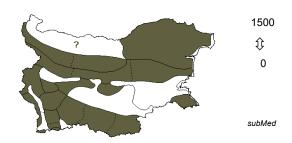
Mercurialis annua



Mercurialis ovata



$\underset{\scriptscriptstyle L.}{\text{Mercurialis}} \text{ perennis}$



Merendera attica

(Spruner ex Tomm.) Boiss. ex Spruner



Merendera sobolifera C. A. Mey.

700 Û
0

Med-OT

Mespilus germanica



${\color{red} Meum\ athamanticum}_{\rm Jacq.}$

2900 tì 1800

Mibora minima (L.) Desv.



Micromeria cristata (Hampe) Griseb.



Micromeria dalmatica



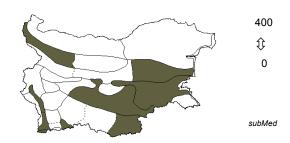
Micromeria frivaldszkyana (Degen) Velen.



Micromeria juliana (L.) Benth. ex Rchb.



Micropyrum tenellum

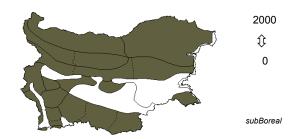


Middendorfia borystenica (Schrank) Trautv.



Pont-Med

Milium effusum



Milium vernale



Mimulus guttatus



Minuartia adenotricha Schischk.



Minuartia anatolica (Boiss.) Woron.



Minuartia attica (Boiss. & Spruner) Vierh.



Minuartia bilykiana



Minuartia bosniaca



Minuartia bulgarica



Minuartia caespitosa (Ehrh.) Degen



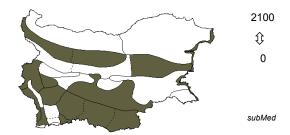
Minuartia garckeana (Asch. & Graebn.) Mattf.



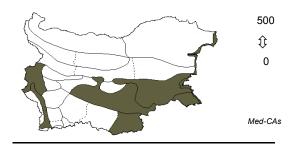
Minuartia glomerata (M. Bieb.) Degen

2900 t) 0

Minuartia hirsuta (M. Bieb.) Hand.-Mazz.



Minuartia hybrida (Vill.) Schischk.



Minuartia intermedia Panov



Minuartia janevii



Minuartia mediterranea (Ledeb.) K. Maly



Minuartia mesogitana (Boiss.) Hand.-Mazz.



Minuartia montana



Minuartia mutabilis

Schinz & Thell.



Minuartia recurva (All.) Schinz & Thell.



Minuartia rhodopaea (Degen) Kožuharov & Kuzmanov



Minuartia rumelica

200 **Û** 0 Bul

Minuartia saxifraga (Friv.) Graebn.



Minuartia setacea (Thuill.) Hayek



Minuartia stojanovii (Kit.) Kožuharov & Kuzmanov



Minuartia strandjensis



Minuartia velutina (Boiss. & Orph.) Graebn.



Minuartia verna



Minuartia viscosa

(Schreb.) Schinz & Thell.



Misopates orontium (L.) Raf.



Modiola caroliniana

(L.) G. Don. f.



Moehringia grisebachii

700 tì 0

Moehringia jankae Griseb. ex Janka



Moehringia muscosa



Moehringia pendula (Waldst. & Kit.) Fenzl



Moehringia trinervia (L.) Clairv.



Moenchia erecta (L.) Gaertn., B. Meyer & Scherb.

300 t) 0

Moenchia graeca



Moenchia mantica



Molineriella minuta

500 tr 0

Molinia arundinacea

Molinia coerulea

Molinia horanzskyi



Mollugo cerviana



Moneses uniflora (L.) A. Gray



${\bf Monotropa}_{{\rm L.}} {\bf hypopitys}$



Montia fontana



Montia sibirica



Morina persica



$\mathop{\text{Morus alba}}_{\scriptscriptstyle{L.}}$



Morus nigra

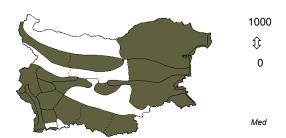
500 Û 0

Muscari armeniacum Leichtlin ex Baker

$\underset{(L.) \ Mill.}{\text{Muscari botryoides}}$



Muscari comosum (L.) Mill.



Muscari neglectum Guss. ex Ten.



Muscari pulchellum Heldr. & Sart. ex Boiss.



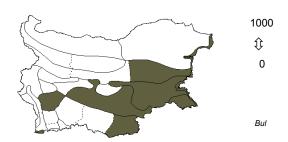
Muscari racemosum



Muscari tenuiflorum



Muscari vandasii Velen.



Myagrum perfoliatum



Mycelis muralis (L.) Dumort.



$\underset{F.\ W.\ Schmidt}{\text{Myosotis alpestris}}$



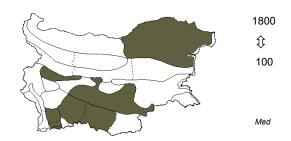
Myosotis arvensis



Myosotis aspera



Myosotis cadmea



Myosotis cyanea (Boiss. & Heldr.) Peev et N. Andreev



Myosotis incrassata Guss.



Myosotis jordanovii N. Andreev & Peev



Myosotis laxa



Myosotis margaritae _{Štěpánková}



Myosotis michaelae Štěpánková



$\underset{\mathrm{Besser}}{\mathsf{Myosotis}} \underset{\mathrm{Besser}}{\mathsf{nemorosa}}$

2900 th 1000 subMed-As

$\underset{\mathrm{Boiss.}}{\mathsf{Myosotis}} \, \underset{\mathrm{Boiss.}}{\mathsf{olympica}}$



Myosotis orbelica (Velen.) Peev & N. Andreev



$Myosotis \ \underset{Rochel}{ramosissima}$



$\underset{\mathrm{Velen.}}{\mathsf{Myosotis}} \, \underset{\mathrm{Velen.}}{\mathsf{hodopea}}$



$\hbox{Myosotis scorpioides} \\$



Myosotis sicula



Myosotis sparsiflora



Eur-As

Myosotis stricta Link ex Roem. & Schult.



Myosotis suaveolens Waldst. & Kit.



Myosotis sylvatica Ehrh. ex Hoffm.



$\underset{(L.)\ Moench}{\text{Myosoton aquaticum}}$



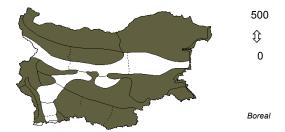
${\hbox{Myosurus}}_{{\tiny L.}}{\hbox{minimus}}$



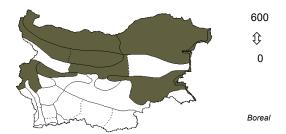
$\underset{(L.)\ \mathrm{Desv.}}{\mathsf{Myricaria}}\ \underset{(L.)}{\mathsf{germanica}}$



Myriophyllum spicatum



$Myriophyllum_{\stackrel{L.}{}} verticillatum$



Myrrhoides nodosa (L.) Cannon



Najas graminea



Najas marina



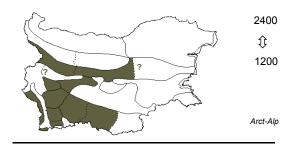
Najas minor



Narcissus pseudonarcissus



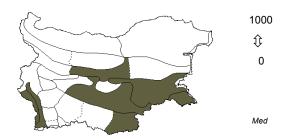
Nardus stricta



$\underset{\text{R. Br.}}{\textbf{Nasturtium officinale}}$



Neatostema apulum (L.) I. M. Johnst.



Nectaroscordum siculum (Ucria) Lindl.



$\underset{(\mathrm{L.)\ Rich.}}{\mathsf{Neottia}} \ \underset{(\mathrm{L.)\ Rich.}}{\mathsf{nidus-avis}}$



Nepeta cataria



Nepeta nuda



Nepeta parviflora



Nepeta ucranica

300 Û
0

!
Eur-As

$\underset{(L.)\ \mathrm{Desv.}}{\text{Neslia paniculata}}$

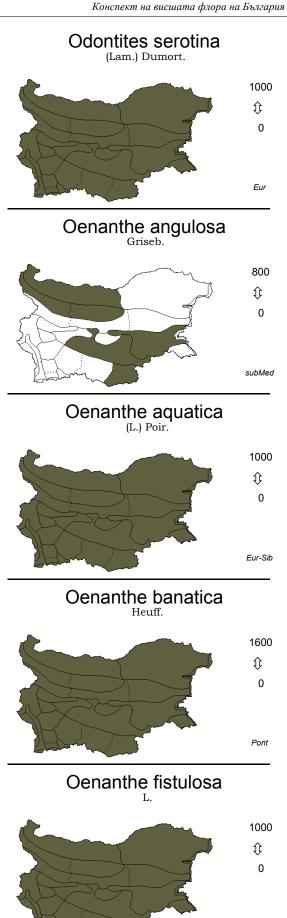


Nicandra physaloides (L.) Gaertn.



Nigella arvensis $_{\scriptscriptstyle L.}$ Nonea atra 1000 1000 **Û** ${\bf \hat{t}}$ 0 0 subMed subBal Nigella damascena Nonea obtusifolia (Willd.) DC. 700 0 ${\bf \hat{U}}$ Û 0 0 subMed Med Nigella elata Nonea pallens Petrovič 1000 500 Û \hat{v} 0 0 Pont-Med Pont Nigella orientalis $\underset{(\mathrm{L.)\ DC.}}{\text{Nonea pulla}}$ 1000 700 ${\bf \hat{v}}$ Û 0 0 subMed subMed Nigritella nigra Nonea ventricosa (Sm.) Griseb. 2700 1000 $\hat{\mathbf{t}}$ ${\bf \hat{U}}$ 1700 0 Eur subMed

$\underset{(L.)~\mathrm{Sm.}}{\text{Nuphar lutea}}$ 200 **Û** 0 Nymphaea alba 200 Û 0 Eur-Med Nymphoides peltata (S. G. Gmel.) Kuntze 100 Û 0 Eur-Sib Odontites glutinosa (M. Bieb.) Benth. 2000 **Û** 200 Pont-Med **Odontites lutea** (L.) Clairv. 1800 $\hat{\mathbf{t}}$ 300 Eur

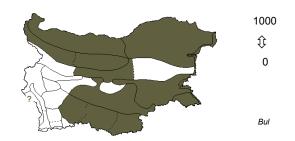


Eur-Med

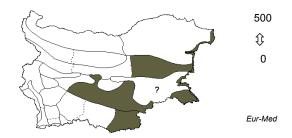
Oenanthe lachenalii C. C. Gmel.



Oenanthe millefolia



Oenanthe pimpinelloides $_{\scriptscriptstyle L.}$



Oenanthe silaifolia



Oenanthe stenoloba



Oenanthe tenuifolia Boiss. & Orhp.



Oenothera biennis $_{\scriptscriptstyle L.}$



Oenothera bulgarica Delip.



Oenothera parviflora



Oenothera stricta



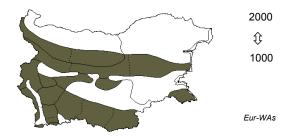
Omalotheca norvegica (Gunn.) Sch. Bip. & F. Schul.



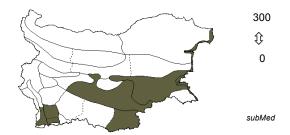
Omalotheca supina



Omalotheca sylvatica (L.) Sch. Bip. & F. Schul.



Onobrychis aequidentata $_{\rm (Sm.)\ D'Urv.}$



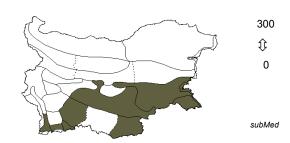
Onobrychis alba (Waldst. & Kit.) Desv.



Onobrychis arenaria (Kit.) DC.



Onobrychis caput-gali



Onobrychis degenii



Onobrychis gracilis



Onobrychis inermis



Onobrychis lasiostachya Boiss.



Onobrychis montana $_{\scriptscriptstyle \mathrm{DC.}}$



Onobrychis pindicola Hausskn.



Onobrychis tanaitica Spreng.



Onobrychis viciifolia



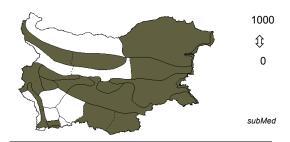
Ononis adenotricha



Ononis arvensis $_{\scriptscriptstyle L.}$



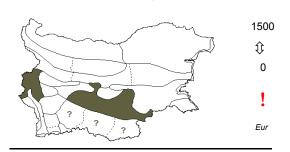
Ononis pusilla



Ononis reclinata

500 ♀ 100

Ononis repens $_{\scriptscriptstyle L.}$



Ononis spinosa



Onopordum acanthium $_{\scriptscriptstyle L.}$



Onopordum bracteatum Boiss. & Heldr.



Onopordum illyricum $_{\scriptscriptstyle L.}$



Onopordum tauricum $_{\mathrm{Willd.}}$



Onosma arenaria



Eur

Onosma aucherana



Onosma echioides

1500 Û
0

Onosma heterophylla Griseb.



Onosma lypskyi



Onosma malkarmayorum $_{\rm Teppner}$



Onosma pavlovii Petrova & Kit Tan



Onosma rhodopea $_{\mathrm{Velen.}}$



Onosma rigida

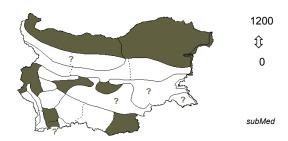


Onosma stojanoffii (Turrill) Teppner

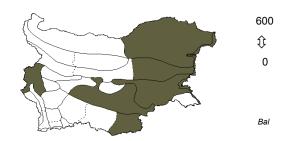


Onosma taurica

Pall. ex Willd.



Onosma thracica Velen.



Onosma visianii

Clementi



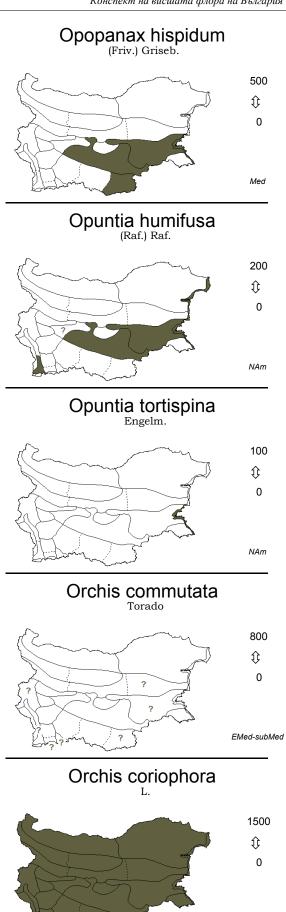
Ophioglossum vulgatum $_{\scriptscriptstyle L.}$



Ophrys apifera

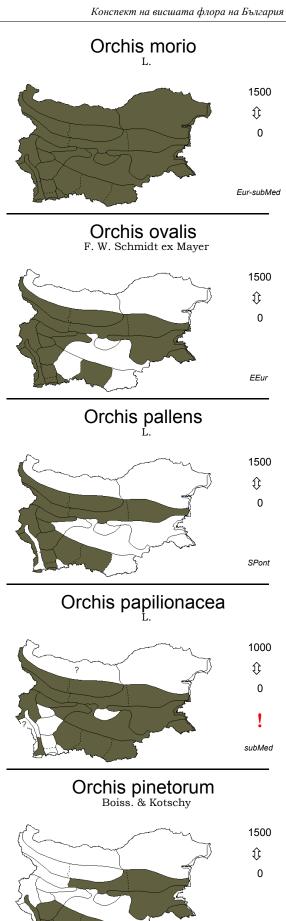


Ophrys cornuta Steven 1400 **Û** 0 Bal-Anat Ophrys insectifera 1000 **Û** 0 Eur Ophrys mammosa $_{\mathrm{Desf.}}$ 1400 Û 0 Pont Ophrys reinholdii Spruner ex Fleishm. 400 Û 0 EMed $\underset{(L.)\;\mathrm{Koch}}{\mathsf{Opopanax}}\; \text{chironium}$ 500 Û 0 Med



Eur-subMed

Orchis elegans 1000 **Û** Eur-OT Orchis lactea 1000 Û 0 Pont-Med Orchis laxiflora Lam. s. str. 1000 **Û** 0 subMed Orchis mascula L. s. str. 2000 Û 0 Eur-Sib Orchis militaris 1500 **Û** 0



subMed

Pont-Med

2000

 ${\bf \hat{U}}$

0

Eur-Sib

1700 ��

0

Eur-As

500

 \hat{v}

0

Eur-As

200

Û

subMed

900

 ${\bf \hat{U}}$

0

Ap-Bal

Orchis provincialis Orchis ustulata 300 **Û** 0 Orchis purpurea Origanum vulgare 1500 Û 0 subMed Orchis simia Orlaya daucoides (L.) Greuter Lam. 1800 Û 0 subMed Orlaya daucorlaya Murb. Orchis spitzelii Saut. ex Koch 1000 Û 0 subMed Orchis tridentata Orlaya grandiflora (L.) Hoffm. Scop. 1600 **Û** 0 Eur-subMed

Ornithogalum amphibolum



Ornithogalum boucheanum Asch.



Ornithogalum comosum



Ornithogalum divergens



$\underset{\text{Willd.}}{\text{Ornithogalum fimbriatum}}$



Ornithogalum kochii



Ornithogalum montanum



Ornithogalum narbonense



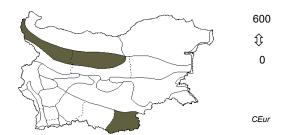
Ornithogalum nutans $_{\scriptscriptstyle L.}$



$Ornithogalum\ oligophyllum\ _{\rm Clarke}$



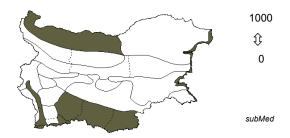
Ornithogalum pyramidale



Ornithogalum pyrenaicum



Ornithogalum refractum Kit. ex Schlecht.



Ornithogalum sibthorpii



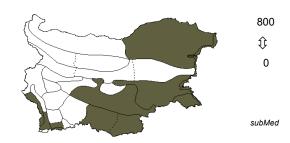
Ornithogalum sphaerocarpum



Ornithogalum umbellatum



Ornithopus compressus



Orobanche aegyptiaca



Orobanche alba Stephan ex Willd.



Orobanche alsatica Kirschl.

100 ${\bf \hat{U}}$ 0 subMed-CAs

Orobanche amethystea $_{\text{\tiny Thuill.}}$



Orobanche arenaria $_{\rm Borkh.}$



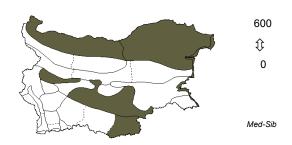
Orobanche caryophyllacea $_{\mathrm{Sm.}}$



Orobanche crenata



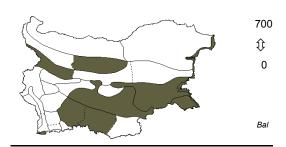
Orobanche cumana Wallr.



Orobanche elatior



Orobanche esulae



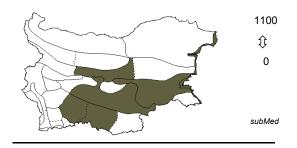
Orobanche gracilis $_{\mbox{\scriptsize Sm.}}$



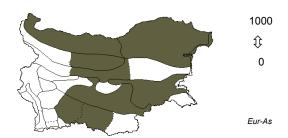
Orobanche laserpitii-sileris Reut.



Orobanche loricata



Orobanche lutea



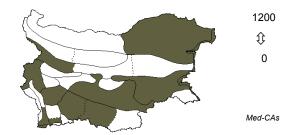
Orobanche minor



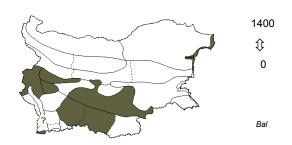
Orobanche mutelii F. W. Schultz



Orobanche oxyloba (Reut.) Beck



Orobanche pancicii $_{G.\;Beck}$



Orobanche picridis F. Schultz ex Koch



Eur

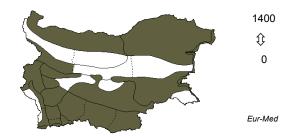
Orobanche pubescens ${}^{\rm D'Urv.}$



Orobanche purpurea $_{\rm Jacq.}$



Orobanche ramosa



Orobanche reticulata



Orobanche serbica Beck & Petrovič



Orobanche teucrii



Orthilia secunda (L.) House



Osmunda regalis



Ostrya carpinifolia Scop.



Osyris alba



Otanthus maritimus (L.) Hoffm. & Link



Oxalis acetosella



Oxalis corniculata

1000 ${\bf \hat{v}}$ 0 Eur-As

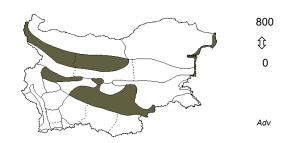
Oxalis dillenii Jacq.



Oxalis fontana



Oxalis stricta



Oxyria digyna $_{(L.) \ Hill}$



$\underset{(\mathrm{L.)\ DC.}}{\mathsf{Oxytropis}} \underset{(\mathrm{L.)\ DC.}}{\mathsf{campestris}}$



Oxytropis kozhucharovii D. Pavlova, D. Dimitrov, M. Nikolova



Oxytropis pilosa



Oxytropis urumovii



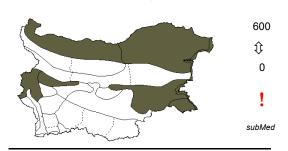
Paeonia mascula



Paeonia peregrina $_{\mathrm{Mill.}}$



Paeonia tenuifolia



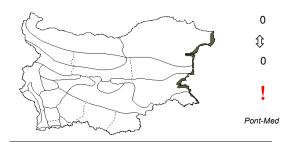
Paliurus spina-christi



Pallenis spinosa (L.) Cass.



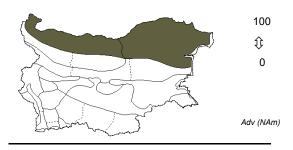
Pancratium maritimum



$\text{Panicum}_{\text{\tiny L.}} \text{capillare}$



Panicum dichotomiflorum Michaux.



$\underset{\text{Ten.}}{\text{Papaver apulum}}$



Papaver degenii (Urum. & Jav.) Kuzmanov



$\hbox{Papaver dubium}$



Papaver hybridum

500 ${\bf \hat{v}}$ 0 Med-CAs

Papaver laevigatum M. Bieb.



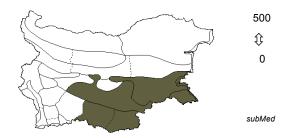
Papaver pinnatifidum $_{\mathrm{Moris}}$



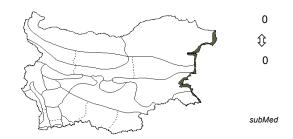
Papaver rhoeas



$\underset{\mathrm{Velen.}}{\mathsf{Papaver}} \, \underset{\mathrm{Velen.}}{\mathsf{rumelicum}}$



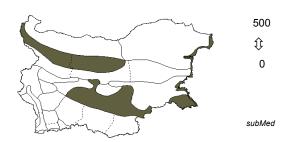
Parapholis incurva (L.) C. E. Hubb.



Parentucellia latifolia



Parietaria diffusa



Parietaria erronea



Parietaria lusitanica

1000 ♀
0

Med-As

Parietaria officinalis



Parietaria rhodopaea



Paris quadrifolia



Parnassia palustris



Paronychia cephalotes (M. Bieb.) Besser



Paronychia kapela (Hacq.) A. Kern.



Paronychia rechingeri Chaudhri



Parthenocissus inserta

(A. Kern.) Fritsch



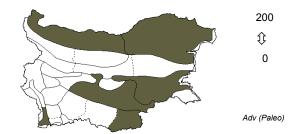
Parthenocissus quinquefolia (L.) Planch.



$Parvotrisetum\ myrianthum \\ \text{(Bertol.) Chrtek}$



Paspalum paspalodes (Michx) Scribn.



Pastinaca argyrophylla Delip.



Pastinaca hirsuta



Pastinaca sativa



Pastinaca umbrosa Steven & DC.



Pedicularis comosa



Pedicularis grisebachii



Pedicularis hoermanniana $_{\mbox{\tiny K. Maly}}$



$\underset{\rm Griseb.}{\text{Pedicularis leucodon}}$



Pedicularis moesiaca Standl.



Pedicularis occulta



Pedicularis oederi



Pedicularis orthantha Griseb.



$\underset{\scriptscriptstyle L.}{\text{Pedicularis}} \text{ palustris}$



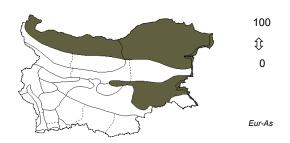
$\underset{\mathrm{Ten.}}{\text{Pedicularis}} \text{ petiolaris}$



$\underset{\scriptscriptstyle L.}{\text{Pedicularis verticillata}}$



Peganum harmala



Pennisetum setaceum

(Forssk.) Chiov.



Peplis alternifolia M. Bieb.



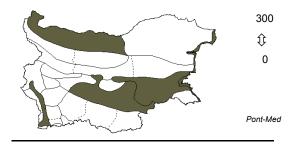
Peplis portula



Peridictyon sanctum (Janka) Seberg, S. Frederiksen & Baden



Periploca graeca



Persicaria amphibia



$\underset{(L.)~\mathrm{Opiz}}{\mathsf{Persicaria}}~\underset{(L.)~\mathrm{Opiz}}{\mathsf{hydropiper}}$



Persicaria lapathifolia



Persicaria maculata (Raf.) Gray



Persicaria minor (Huds.) Opiz



Persicaria mitis (Schrank) Opiz



Persicaria salicifolia (Brouss. Ex Willd.) Assenov



Petasites albus

(L.) Gaertn.



Petasites hybridus (L.) Gaertn.



Petasites kablikianus

Tausch ex Berch.



Petrorhagia alpina (Hablitz) P. W. Ball & Heywood



Petrorhagia illyrica (Ard.) P. W. Ball & Heywood



Petrorhagia prolifera (L.) P. W. Ball & Heywood



Petrorhagia saxifraga



Petrorhagia thessala (Boiss.) P. W. Ball & Heywood



Petrorhagia velutina (Guss.) P. W. Ball & Heywood



Petrosimonia brachiata

(Pall.) Bunge



Peucedanum aegopodioides (Boiss.) Vandas



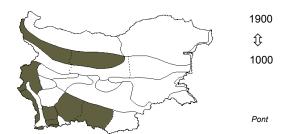
Peucedanum alsaticum $_{\scriptscriptstyle L.}$



Peucedanum arenarium Waldst. & Kit.

1600 $\hat{\mathbf{t}}$ 0 Eur-Med

Peucedanum austriacum (Jacq.) Koch



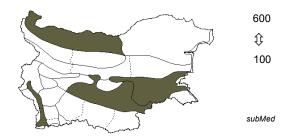
$Peucedanum_{\substack{\text{Vill.}}} carvifolium$



Peucedanum cervaria (L.) Lapeyr.



Peucedanum longifolium Waldst. & Kit.



Peucedanum officinale



Peucedanum oligophyllum (Griseb.) Vandas



$Peucedanum \ ostruthium \\ _{(L.) \ Koch}$



$\underset{(L.) \; Moench}{\textbf{Peucedanum palustre}}$



Peucedanum ruthenicum



Peucedanum vittijugum



Phacelia tanacetifolia



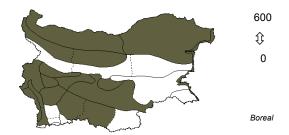
Phacelurus digitatus (Sm.) Griseb.



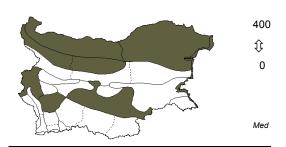
Phalaris aquatica



Phalaris arundinacea $_{\scriptscriptstyle L.}$



Phalaris canariensis



Phalaris paradoxa



Phillyrea latifolia



$\begin{array}{c} \text{Phleum alpinum} \\ \text{\tiny L.} \end{array}$



Phleum graecum Boiss. & Heldr.



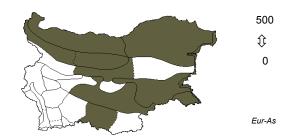
Phleum hirsutum



Phleum montanum C. Koch



Phleum paniculatum Huds.



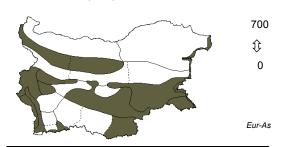
Phleum phleoides (L.) Karst.



Phleum pratense $_{\text{L.}}$



Phleum subulatum (Savi) Asch. & Graebn.



Phlomis herba-venti

1000 Û

Eur-As

Phlomis tuberosa



$\underset{(Host)\ Trin.}{\textbf{Pholiurus pannonicus}}$



Phragmites australis (Cav.) Trin. ex Steud.



$\begin{array}{c} Phyllitis\ scolopendrium \\ {}_{(L.)\ Newman} \end{array}$



Physalis alkekengii



$\begin{array}{c} Physospermum \ cornubiense \\ {}_{(L.)\ DC.} \end{array}$



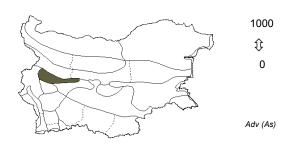
Phyteuma confusum



Phytolacca americana



Phytolacca esculenta Van Houtte



Picea abies



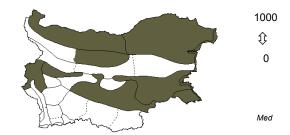
Picnomon acarna (L.) Cass.



Picris altissima



Picris echiodes



Picris hieracioides



Picris pauciflora



Picris sprengerana $_{(L.) \text{ Poir.}}$



Pimpinella major (L.) Huds.



${\bf Pimpinella}_{{\rm L.}} {\bf peregrina}$



Pimpinella saxifraga



Pimpinella tragium $_{\mathrm{Vill.}}$



Pinguicula balcanica

2800 Û 900

Pinus brutia

Pinus heldreichii Christ.

2400 th 1400 Ap-Bal

Pinus mugo Turra

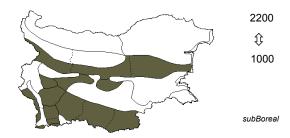
Pinus nigra



Pinus peuce Griseb.



Pinus sylvestris



Piptatherum holciforme (M. Bieb.) Roem. & Schult.



Piptatherum virescens (Trin.) Boiss.



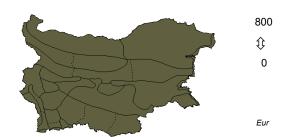
Pirinia koenigii



Pistacia terebinthus



Pisum elatius M. Bieb.



Pisum sativum



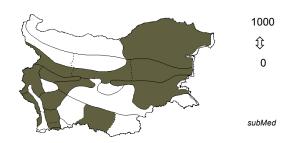
Plantago afra



Plantago altissima



Plantago argentea



Plantago atrata



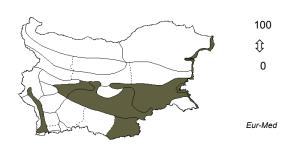
Plantago bellardii



Plantago cornuti



Plantago coronopus



Plantago gentianoides $_{^{\mathrm{Sm.}}}$



Plantago lagopus



Plantago lanceolata



Plantago major



Plantago maritima



Plantago maxima Juss. ex Jacq.



Plantago media



Plantago scabra



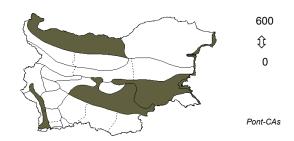
Plantago sempervirens Crantz



Plantago subulata



Plantago tenuiflora Waldst. & Kit.



Platanthera bifolia



Platanthera chlorantha (Custer) Rchb.



Platanus orientalis



Pleuropteropyrum undulatum (A. Murray) A. & D. Lőve



$\begin{array}{c} Pleurospermum \ austriacum \\ {}_{(L.)\ Hoffm.} \end{array}$



Plumbago europaea $_{\scriptscriptstyle L.}$



Poa aitosensis Kožuharov & Stoeva



Poa alpina



Poa angustifolia



Poa annua



Poa badensis Haenke ex Willd.

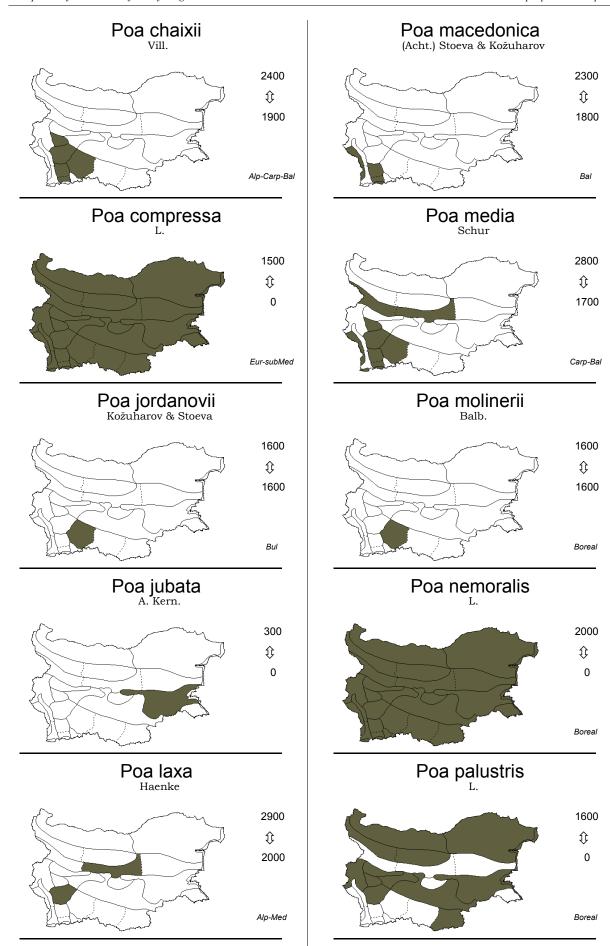


Poa bulbosa

1000 ${\bf \hat{v}}$ 0 Eur-As

Poa cenisia





Poa perconcinna Edmonds



Poa pirinica Stoj. & Acht.



Poa pratensis



Poa pseudoconcina _{Schur}



Poa sterilis M. Bieb.



Poa sylvicola



Poa timoleontis Heldr. ex Boiss.



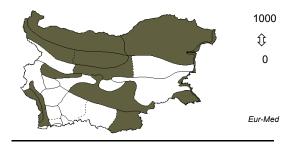
Poa trivialis



Polycarpon diphyllum



Polycarpon tetraphyllum $_{(L.)\ L.}$



Polycnemum arvense



Polycnemum heuffelii Lang.



Polycnemum majus



Polygala acarnanica (Chodat) Kožuharov & Petrova



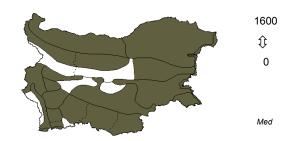
Polygala alpestris



Polygala amarella



Polygala anatolica



Polygala carniolica



Polygala comosa Schkuhr



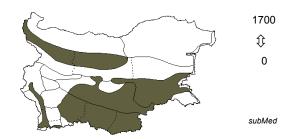
Polygala hospita



Polygala major



Polygala mediterranea (Chodat) Dalla Torre & Sarnth.



Polygala monspeliaca



Polygala oxyptera



Polygala rhodopea (Velen.) Janch.



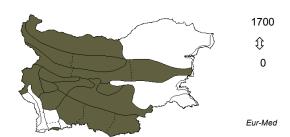
Polygala sibirica



Polygala supina



Polygala vulgaris



Polygonatum latifolium (Jacq.) Desf.



Polygonatum multiflorum (L.) All.



$\underset{(Mill.)\ Druce}{\text{Polygonatum odoratum}}$



$\underset{(L.)\ All.}{\text{Polygonatum}}\ \underset{(L.)\ All.}{\text{verticillatum}}$



Polygonum arenastrum Boreau



Polygonum aviculare



Polygonum cognatum Meisn.





$Polygonum \underset{\mathrm{Chrtek}}{mesembricum}$



$\underset{\scriptscriptstyle{M.\;\mathrm{Bieb.}}}{\mathsf{Polygonum}}\;\mathsf{patulum}$



Polygonum pulchellum Loisel.



Polygonum rurivagum Jord. ex Boreau



Polypodium cambricum



${\color{blue} \textbf{Polypodium interjectum}} \\ {\color{blue} \textbf{Shivas}} \\ {\color{blue} \textbf{Interjectum}} \\ {\color{blue} \textbf{Shivas}} \\$



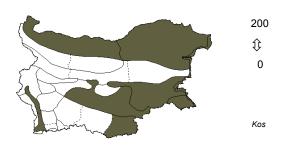
$\begin{array}{c} \text{Polypodium mantoniae} \\ \text{\tiny Rothm.} \end{array}$



$\underset{\scriptscriptstyle{L.}}{\text{Polypodium}} \ \text{vulgare}$



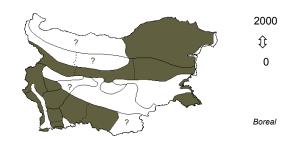
$Polypogon \ monspeliens is \\ _{(L.)\ Desf.}$



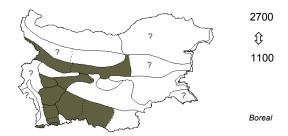
Polypogon viridis (Gouan) Breistr.



$\underset{(L.)\;Roth}{\text{Polystichum aculeatum}}$



$\underset{(L.)\;Roth}{\text{Polystichum lonchitis}}$



Polystichum setiferum (Forssk.) Moore



Populus alba $_{\scriptscriptstyle L.}$



Populus canadensis



Populus canescens (Aiton) Sm.



Populus nigra



$\underset{\scriptscriptstyle{L.}}{\text{Populus tremula}}$



Portulaca oleracea



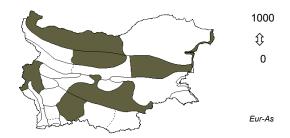
$Potamogeton \ acutifolius$



Potamogeton alpinus



$Potamogeton \ berchtoldii \\ {}^{\rm Fieb.}$



Potamogeton crispus



Potamogeton friesii



Potamogeton gramineus



Potamogeton lucens



Potamogeton natans



$Potamogeton \ nodosus \\ {}^{Poir.}$



Potamogeton obtusifolius Mertens & Koch



Potamogeton pectinatus



Potamogeton perfoliatus



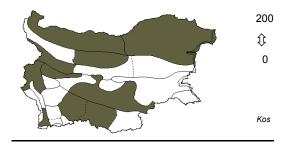
Potamogeton polygonifolius



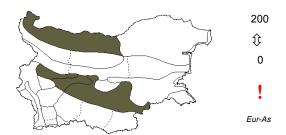
$\underset{wulfen}{\mathsf{Potamogeton}} \ \mathsf{praelongus}$



Potamogeton pusillus



Potamogeton trichoides Cham. & Schlecht.



Potentilla alba



Potentilla anserina



Potentilla apennina



Potentilla argentea



Potentilla astracanica



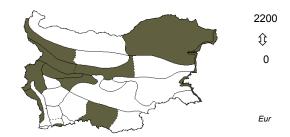
Potentilla bornmuelleri



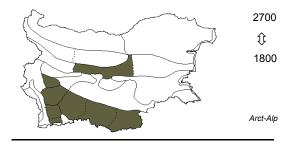
Potentilla chrysantha Trevir.

1100 1000 Pont-Sib

Potentilla cinerea Chaix ex Vill.



Potentilla crantzii (Crantz) Beck ex Fritsch



Potentilla detommasii $_{\mathrm{Ten.}}$



Potentilla emili-popii



Potentilla erecta (L.) Raeusch.



Potentilla fruticosa



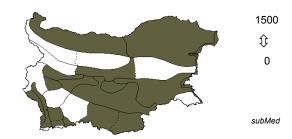
Potentilla haynaldiana



Potentilla inclinata



Potentilla laciniosa Waldst. & Kit. ex Nestl.

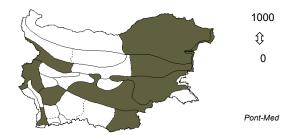


Potentilla micrantha

Ramond ex DC.



Potentilla mollicrinis (Borbás) Stankov



Potentilla montenegrina

1700 $\hat{\mathbf{t}}$ 1500 Bal

Potentilla neglecta



Potentilla nicici Adamović



Potentilla obscura



Potentilla palustris (L.) Scop.



Potentilla patula Waldst. & Kit.



Potentilla pedata Willd.



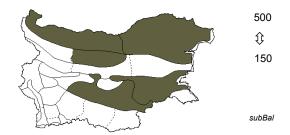
Potentilla pilosa



Potentilla pindicola (Nyman) Hausskn.



Potentilla pirotensis (Borbás) Markova



Potentilla regis-borisii Stoj.



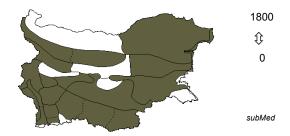
Potentilla reptans



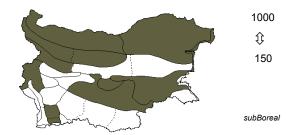
${\bf Potentilla}_{{\rm L.}} {\bf rupestris}$



Potentilla sulphurea



Potentilla supina



Potentilla ternata



Prangos ferulacea (L.) Lindl.



$Prenanthes _{_{L.}} purpurea \\$



Primula acaulis $_{\scriptscriptstyle (L.)\ L.}$



Primula deorum Velen.



Primula elatior



Primula farinosa



Primula frondosa



Primula halleri J. F. Gmel.



Primula minima



Primula veris



Pritzelago alpina (L.) Kuntze



Prunella grandiflora (L.) Scholler



Prunella laciniata



Prunella vulgaris



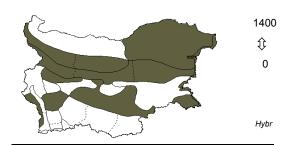
Prunus avium



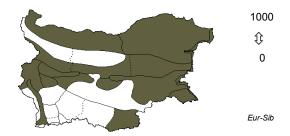
Prunus cerasifera Ehrh.



Prunus domestica



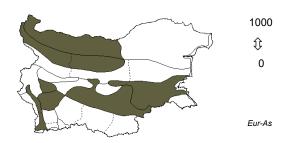
Prunus fruticosa



Prunus mahaleb



Prunus padus



$\underset{\mathrm{Ehrh.}}{\mathsf{Prunus}} \ \underset{\mathrm{Ehrh.}}{\mathsf{serotina}}$



Prunus spinosa $_{\text{L.}}$



Pseudorchis albida (L.) A. & D. Lóve



Pseudotsuga menziesii (Mirb.) Franco



Psilurus incurvus (Gouan) Schinz & Thell.

500 ${\bf \hat{U}}$ 0 subMed

$\underset{(L.) \; Kuhn}{\textbf{Pteridium aquilinum}}$



Pterocephalus papposus (L.) Coult.



Ptilostemon afer (Jacq.) Greuter



Puccinellia convoluta (Hornem.) P.Fourr.



Puccinellia distans



Puccinellia festuciformis (Host) Parl.



Puccinellia hauptiana (Trin.) Krecz.



Puccinellia limosa (Schur) Holmb.

(Schur) Holling.



Puccinellia salinaria (Simonk.) Holmb.



Pulicaria dysenterica (L.) Bernh.



Pulicaria vulgaris



Pulmonaria angustifolia



Pulmonaria mollis Wulfen ex Hornem.



Pulmonaria obscura Dumort.



Pulmonaria officinalis



Pulmonaria rubra



Pulsatilla halleri (All.) Willd.



Pulsatilla montana (Hoppe) Rchb.

1400 Û
0

Eur

$\underset{(L.)\ Mill.}{\text{Pulsatilla pratensis}}$



Pulsatilla slaviankae (Zimm.) Jordanov & Kožuharov



Pulsatilla vernalis



Pycreus flavescens (L.) Rchb.



$\underset{(L.)\;\mathrm{Hayek}}{\mathsf{Pycreus}}\; \underset{(L.)\;\mathrm{Hayek}}{\mathsf{glaber}}$



Pycreus globosus (All.) Rchb.



Pycreus glomeratus (L.) Hayek



$\underset{(L.)\;\mathrm{Hayek}}{\mathsf{Pycreus}}\;\mathsf{longus}$



$\underset{(L.)\; Hayek}{\text{Pycreus rotundus}}$



$\underset{(Rottb.)\; Hayek}{\mathsf{Pycreus}} \; \underset{(Rottb.)\; Hayek}{\mathsf{serotinus}}$

\$ 500 \$ 0

Eur-As

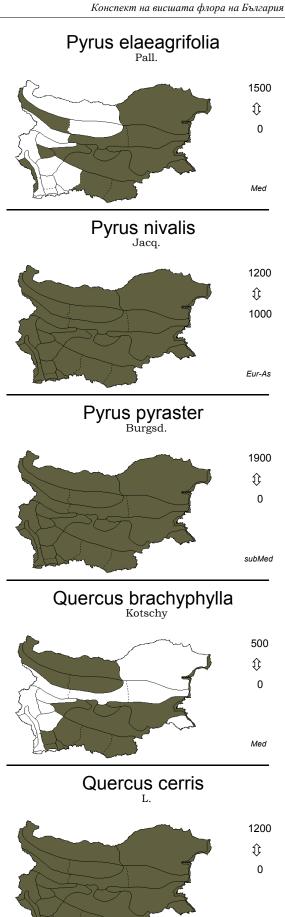
Pyracantha coccinea M. Roem.



Pyrola chlorantha



$\underset{\mathrm{Sw.}}{\text{Pyrola media}}$ 1900 **Û** 1200 Eur-Sib $\underset{\scriptscriptstyle L.}{\text{Pyrola minor}}$ 2900 $\hat{\mathbf{t}}$ 1000 Boreal Pyrola rotundifolia 2000 Û 1750 Boreal Pyrus amygdaliformis $_{\mathrm{Vill.}}$ 1200 **Û** 0 Med Pyrus bulgarica Khutath. & Sachok. 1000 **Û** 0



Eur-subMed

subBal

Quercus coccifera



Quercus dalechampii $_{\text{Ten.}}$



Quercus erucifolia

Steven



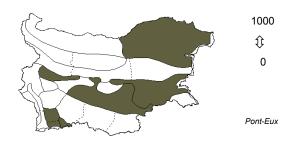
$\underset{\scriptscriptstyle \mathrm{Ten.}}{\mathsf{Quercus}} \ \text{frainetto}$



Quercus hartwissiana Steven



Quercus longipes Steven



Quercus mestensis

Bondev & Gančev



Quercus pedunculiflora



Quercus petraea (Mattuschka) Liebl.



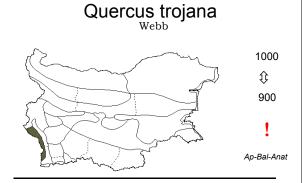
Quercus polycarpa

1200 ${\bf \hat{U}}$ 0 SEux

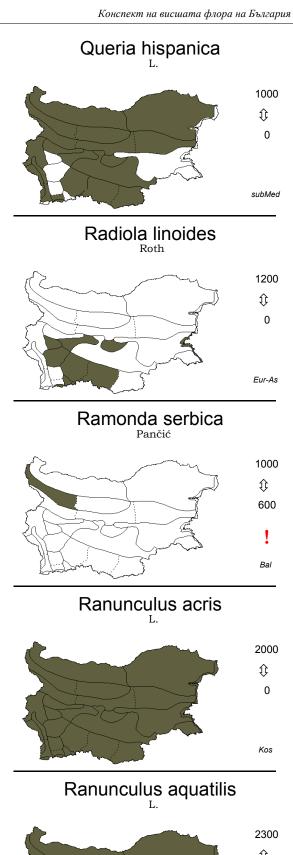
Conspectus of the vascular flora of Bulgaria $\underset{\mathrm{Willd.}}{\mathsf{Quercus}} \, \mathsf{pubescens}$ 1500 **Û** Eur-subMed $\underset{\scriptscriptstyle L.}{\text{Quercus robur}}$ 500 Û 0 subMed



Quercus thracica







Ranunculus arvensis



Ranunculus auricomus $_{\scriptscriptstyle L.}$



Ranunculus bulbosus



Ranunculus carinthiacus



Ranunculus cassubicus $_{\scriptscriptstyle L.}$



Ranunculus chius



Ranunculus circinatus



Ranunculus crenatus Waldst. & Kit.

2600 tì 1600

Ranunculus fallax (Wimm. & Grab.) A. Kern.



Ranunculus ficaria



Ranunculus flammula



Ranunculus fontanus C. Presl



Ranunculus gracilis E. D. Clarke



Ranunculus hayekii



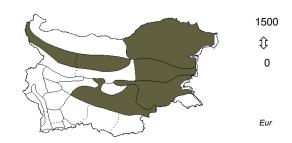
Ranunculus illyricus



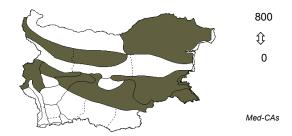
$Ranunculus in comparabilis \\ {\tt Janka}$



Ranunculus lanuginosus



Ranunculus lateriflorus



Ranunculus lingua

1500 ⊕
0

Eur-As

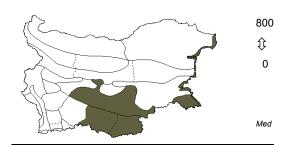
Ranunculus millefoliatus



Ranunculus montanus Willd.



Ranunculus muricatus



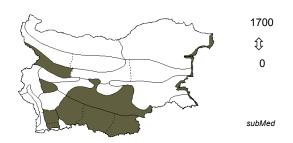
Ranunculus neapolitanus



Ranunculus nemorosus $_{\mathrm{DC.}}$



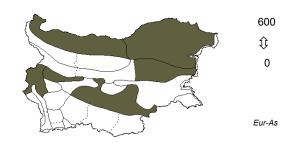
Ranunculus ophioglossifolius $_{\text{Vill.}}$



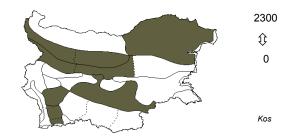
Ranunculus oxyspermus



Ranunculus pedatus Waldst. & Kit.



Ranunculus peltatus



Ranunculus penicillatus (Dumort.) Bab.



Ranunculus platanifolius $_{\scriptscriptstyle L.}$



Ranunculus polyanthemoides $_{\tiny Boreau}$



Ranunculus polyanthemos $_{\scriptscriptstyle L.}$



Ranunculus pseudomontanus Schur



Ranunculus psilostachys Griseb.



Ranunculus repens



Ranunculus rionii



Ranunculus rumelicus Griseb.



Ranunculus sardous

1000 ①
0

Eur-Med

Ranunculus sartorianus Boiss. & Heldr.



Ranunculus sceleratus



Ranunculus serbicus



Ranunculus sphaerospermus Boiss. & Blanche



Ranunculus sprunerianus Boiss.



Ranunculus stojanovii $_{\mathrm{Delip.}}$



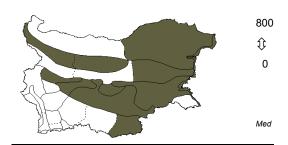
Ranunculus strigulosus



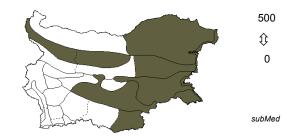
Ranunculus trichophyllus



Ranunculus velutinus



Ranunculus villosus



Raphanus raphanistrum



Rapistrum perenne



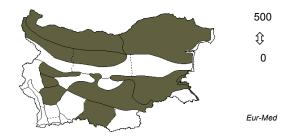
Rapistrum rugosum (L.) All.



Reichardia picroides $_{(L.)\ Roth}$



Reseda inodora



Reseda lutea



Reseda luteola



Rhagadiolus stellatus (L.) Gaertn.



Rhamnus alpinus



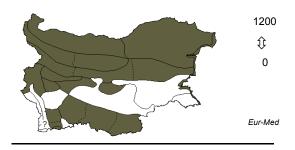
Rhamnus catharticus



$\underset{\mathrm{Velen.}}{\mathsf{Rhamnus}} \ \underset{\mathrm{Velen.}}{\mathsf{rhodopeus}}$



Rhamnus saxatilis



Rheum rhaponticum



Rhinanthus alpinus



Rhinanthus angustifolius C. C. Gmel.



Rhinanthus gracilis



Rhinanthus javorkae



Rhinanthus minor



$\begin{array}{c} \text{Rhinanthus rumelicus} \\ \text{}_{\text{Velen.}} \end{array}$



$\underset{\mathrm{Degen}}{\mathsf{Rhinanthus}} \, \mathsf{wagneri}$



Rhodax alpestris

2500 **Û** 1400 Alp-Med

Rhodax canus

(L.) Fuss



Rhodiola rosea



$\begin{array}{c} Rhododendron\ myrtifolium \\ \text{Schott \& Kotschy} \end{array}$



Rhododendron ponticum $_{\rm L.}$



Rhus coriaria



Rhynchocorys elephas (L.) Griseb.



Ribes alpinum



Ribes aureum



Ribes multiflorum

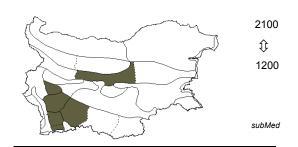
Kit. ex Roem. & Schult.



Ribes nigrum $_{\scriptscriptstyle \rm L.}$



Ribes petraeum Wulfen



Ribes uva-crispa



Rindera umbellata (Waldst. & Kit.) Bunge



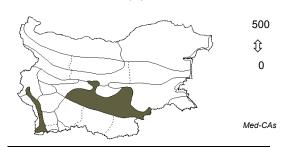
Robinia pseudoacacia



Rochelia disperma $_{(L.\ f.)\ K.\ Koch}$



Roemeria hybrida



Romulea bulbocodium

(L.) Sebast. & Mauri



Romulea linaresii



Rorippa amphibia $_{(L.) \; \mathrm{Besser}}$

500 ⊕
0

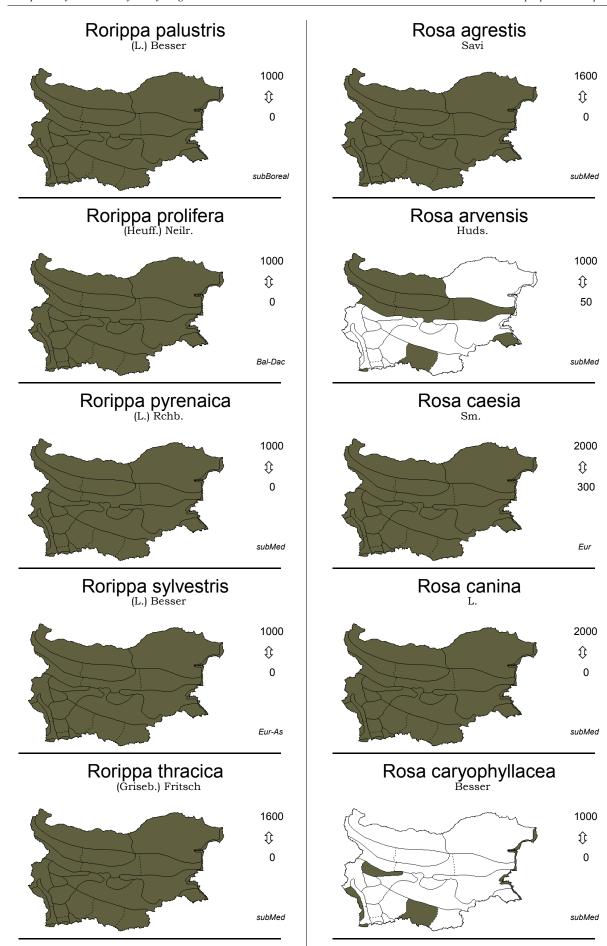
Eur-As

Rorippa armoratioides (Tausch) Fuss

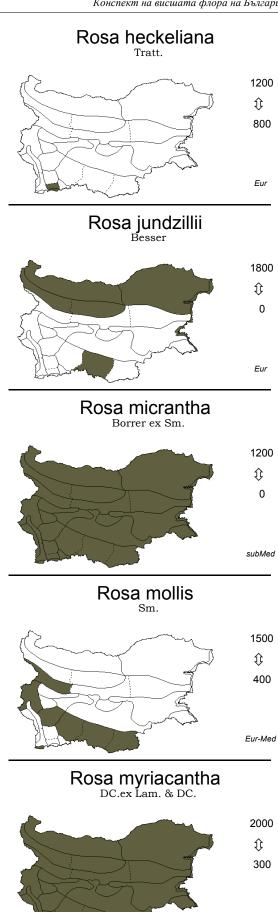
500 1t 0

Rorippa austriaca





Rosa corymbifera Borkh. 1000 Û 0 Rosa dumalis 1500 Û 0 Eur-As Rosa elliptica 1500 Û 500 subMed Rosa gallica 1000 Û 0 Eur-Med Rosa glauca 2000 $\hat{\mathbf{t}}$ 1000



subMed

subMed

Rosa nitidula



Rosa obtusifolia $_{\mathrm{Desv.}}$



Rosa oxyodon Boiss.



Rosa pendulina



Rosa pimpinellifolia $_{\rm L.}$



Rosa pulverulenta



Rosa pumila



Rosa tomentosa

1200 Û 100

Rosa turcica



Rosa villosa



Rosa vosagiaca Desp.



Rubia tinctorum



Rubus anoplocladus $_{\mathrm{Sudre}}^{\mathrm{Nubus}}$



Rubus apiculatus Weihe & Nees



Rubus caesius



Rubus canescens DC.



Rubus cerasifolius Sudre



Rubus condensatus P. J. Müll.



$\underset{_{\rm Holuby}}{\text{Rubus crassus}}$



Rubus discolor Weihe & Nees



Rubus euryanthemus W. Watson



Rubus finitimus



Rubus fragariiflorus



Rubus geniculatus Kaltenb.



Rubus glandulosus $_{\rm Bellardi}$



Rubus guentheri Weihe & Nees



Rubus hebecaulis Sudre



Rubus hercynicus G. Braun ex Focke



Rubus hirtus Waldst. & Kit.

1400 **Û** 800 subMed

Rubus humifusus Weihe & Nees

500 Û 400 Eur

Rubus idaeus



Rubus incultus Wirtg. ex Focke



Rubus koehleri Weihe & Nees



$\underset{\rm Genev.}{\text{Rubus lloydianus}}$



Rubus macrophyllus Weihe & Nees



Rubus macrostachys P. J. Müll.



Rubus melanoxylon P. J. Müll. & Wirtg. ex Genev.

Rubus minutidentatus



Rubus minutiflorus $_{P.~J.~M\ddot{u}ll.}$



Rubus miostilus Boulay



Rubus oblongoobovatus $_{\mathrm{Markova}}$



Rubus pectinatus Sudre & Grav.



Rubus posoniensis $_{\mbox{\tiny Sabr.}}$



Rubus radula Weihe ex Boenn.



Rubus rivularis Wirtg. & P. J. Müll.



Rubus sanguineus



Rubus saxatilis

1900 Û 1000

Rubus scaber

Eur-As

Weihe & Nees



Rubus schleicheri

Weihe ex Tratt.



Rubus serpens Weihe ex Lej. & Court.

1400 \$\frac{1}{3}\$ 800

Rubus spinosulus $_{\mbox{\scriptsize Sudre}}$



Rubus tereticaulis



Rubus thyrsanthus $_{\rm Focke}$



Rubus thyrsiflorus Weihe & Nees



Rubus trachyadenes Sudre



Rubus vepallidus Sudre



Eur

Rumex acetosa

2300 ♀
0

Boreal

Rumex acetosella

L.



$\underset{\scriptscriptstyle{L.}}{\text{Rumex alpinus}}$

2900 t) 650

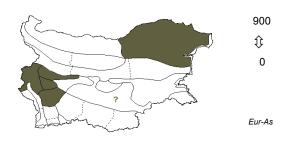
Rumex aquaticus



Rumex arifolius



Rumex confertus Willd.



Rumex conglomeratus Murr.



$\underset{\scriptscriptstyle L.}{\text{Rumex crispus}}$



Rumex cristatus DC.



Rumex dentatus

300 ${\bf \hat{U}}$

0

Med-CAs

Eur-Med

Rumex hydrolapathum Huds.

100 ${\bf \hat{U}}$ 0

Rumex kerneri

Borbás



Rumex maritimus

100 ${\bf \hat{v}}$ 0 Eur-As

Rumex obtusifolius

2000 ${\bf \hat{U}}$ 0 Eur-Med

Rumex palustris



Rumex patientia



$Rumex \underset{\scriptscriptstyle L.}{pulcher}$



Rumex sanguineus



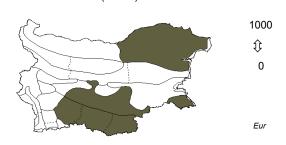
Rumex scutatus



$\underset{\text{Ledeb.}}{\mathsf{Rumex}} \ \underset{\text{Ledeb.}}{\mathsf{stenophyllus}}$



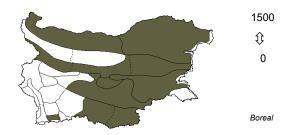
Rumex tenuifolius (Wallr.) A. Löve



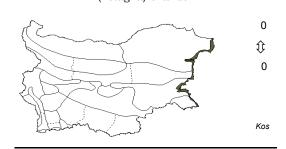
Rumex thyrsiflorus

1000 th 0

Rumex tuberosus $_{\scriptscriptstyle \rm L.}$



Ruppia cirrhosa (Petagna) Grande



Ruppia maritima



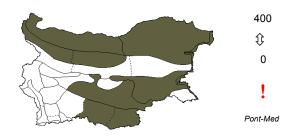
Ruscus aculeatus



Ruscus hypoglossum $_{\scriptscriptstyle L.}$



Ruta graveolens



Sagina apetala



Sagina maritima



Sagina nodosa



Sagina procumbens



Sagina saginoides (L.) Karst.



Sagittaria latifolia



Sagittaria sagitifolia



Salicornia europaea



Salicornia ramosissima Woods



Salix alba



Salix appendiculata



Salix ardana

J. Zieliński & A. Petrova



Salix aurita

1600 ${\bf \hat{v}}$ 1200 Eur

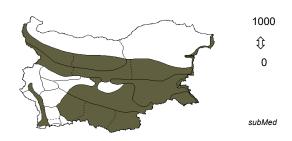
Salix caprea



Salix cinerea

1600 ${\bf \hat{v}}$ 0 Eur-As

Salix eleagnos Scop.



Salix fragilis



Salix hastata



Salix herbacea



Salix lapponum



Salix pentandra



Salix purpurea



Salix reticulata



Salix retusa

2900 t) 2500

Salix rosmarinifolia



Salix silesiaca



Salix triandra



Salix velchevii

J. Zieliński & Z. Pancheva



Salix viminalis



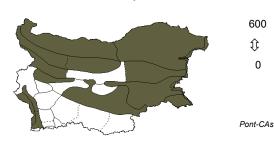
Salix waldsteiniana Willd.



Salix xanticola Christensen

500 **Û** 0 Bal

Salsola ruthenica $_{\rm Iljin}$



Salsola soda



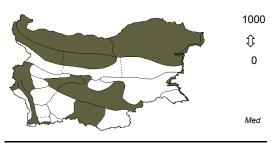
Salvia aethiopis



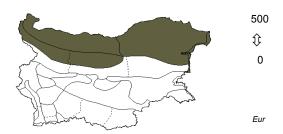
Salvia amplexicaulis



Salvia argentea



Salvia austriaca



Salvia forskahlei



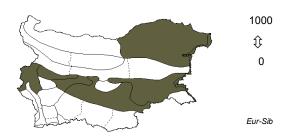
Salvia glutinosa



Salvia nemorosa



Salvia nutans



Salvia officinalis



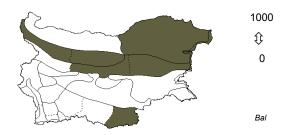
Salvia pinnata



Salvia pratensis



Salvia ringens



Salvia scabiosifolia



Salvia sclarea



Salvia tomentosa



Salvia verbenaca

1000 1000 200

subMed

Salvia verticillata



Salvia virgata

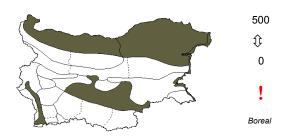


Salvia viridis $_{\scriptscriptstyle L.}$

1000 th 0

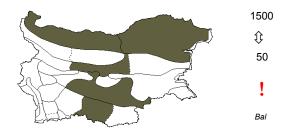
Salvinia natans

(L.) All.



Sambucus deborensis

(Košanin) Košanin



Sambucus ebulus

1700 Û

Eur-Med

Sambucus nigra

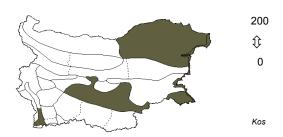
L.



Sambucus racemosa



Samolus valerandii



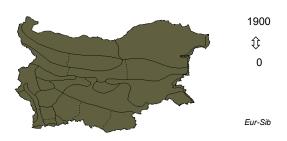
$\underset{\text{Scop.}}{\text{Sanguisorba}} \text{ minor }$



Sanguisorba officinalis



Sanicula europaea



Saponaria bellidifolia



Saponaria glutinosa M. Bieb.



Saponaria officinalis



Saponaria stranjensis Jordanov



Satureja coerulea **J**anka

1000 $\hat{\mathbf{t}}$ 100 subMed

Satureja cuneifolia



Satureja montana



Satureja pilosa



Satureja rumelica _{Velen.}



Saussurea discolor (Willd.) DC.



Saxifraga adscendens



Saxifraga aizoides



Saxifraga androsacea

2900 \$\frac{1}{2200}\$

!

Eur-Sib

Saxifraga bryoides



Saxifraga bulbifera



Saxifraga carpatica Rchb.



Saxifraga exarata



Saxifraga ferdinandi-coburgi Kellerer & Sünd.



Saxifraga graeca



Saxifraga luteo-viridis Schott & Kotschy



Saxifraga marginata



Saxifraga mollis



Saxifraga oppositifolia

2900 Û 2300

Saxifraga paniculata



Saxifraga pedemontana



Saxifraga retusa



Saxifraga rotundifolia



Saxifraga sancta



Saxifraga sempervivum $_{\text{C. Koch}}$



Saxifraga spruneri Boiss.



Saxifraga stellaris



Saxifraga stribrnyi (Velen.) Podp.



Saxifraga tridactilites



Scabiosa argentea



Scabiosa atropurpurea



Scabiosa balcanica

Velen



Scabiosa columbaria



Scabiosa cosmoides

Boiss.



Scabiosa hispidula Boiss.

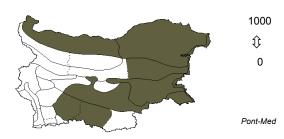
1000 t) 0

Scabiosa lucida



Scabiosa micrantha

Desf.



Scabiosa ochroleuca

L.



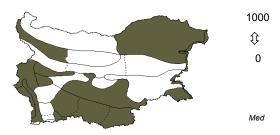
Scabiosa rhodopensis

Stoj. & Stef.



Scabiosa rotata

M. Bieb.



Scabiosa sicula

L.



Scabiosa triniifolia



Scabiosa webbiana



Scandix australis



Scandix pecten-veneris $_{\scriptscriptstyle L.}$



Schivereckia doerfleri (Wettst.) Bornm.



Schoenoplectus lacustris

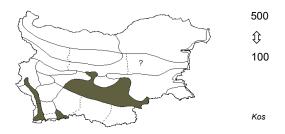
100 Û

Kos

Schoenoplectus litoralis (L.) Palla



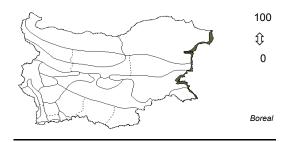
Schoenoplectus mucronatus (L.) Palla



Schoenoplectus tabernemontanii (C. C. Gmel.) Palla



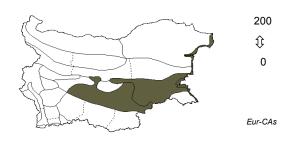
Schoenoplectus triqueter



Schoenus ferrugineus



Schoenus nigricans



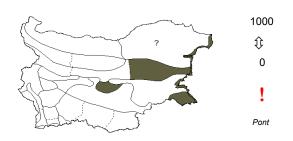
Scilla autumnalis



Scilla bifolia



Scilla bithynica



Scirpus sylvaticus



Scleranthus annuus



Scleranthus collinus Hornung ex Opiz

300 Û 0

Scleranthus dichotomus

1500 ‡
0

Scleranthus neglectus Rochel ex Baumg.



Scleranthus perennis



${\bf Scleranthus}_{{\bf L.}} {\bf polycarpos}$



Scleranthus uncinatus



Sclerochloa dura (L.) P. Beauv.



Scolymus hispanicus



Scolymus maculatus



Scorpiurus subvillosus $_{\scriptscriptstyle L.}$



Scorzonera austriaca



Scorzonera cana (C. A. Mey.) Hoffm.



Scorzonera hispanica



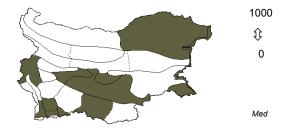
Scorzonera laciniata



Scorzonera lanata (L.) Hoffm.



Scorzonera mollis



$Scorzonera \ parviflora \ _{\rm Jacq.}$



Scorzonera purpurea



Scrophularia aestivalis



Scrophularia bulgarica (Stoj.) Peev

2500 th 1000

Scrophularia canina

1000 ⊕
0

Eur-Med

Scrophularia nodosa $_{\scriptscriptstyle L.}$



Scrophularia scopolii Hoppe ex Pers.



Scrophularia umbrosa



Scutellaria albida



Scutellaria alpina



Scutellaria altissima



Scutellaria columnae



Scutellaria galericulata



Scutellaria hastifolia



Scutellaria orientalis

Scutellaria velenovskyi

500 th 200

Secale montanum

Secale rhodopaeum $_{\mathrm{Delip.}}$



$\underset{_{\rm Host}}{\text{Secale sylvestre}}$



Securigera securidaca (L.) Degen & Dörfl.



$\underset{\scriptscriptstyle L.}{\text{Sedum acre}}$



Sedum aetnense Tineo



Sedum album



Sedum alpestre

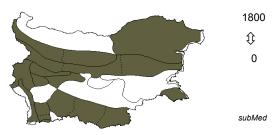


Sedum annuum

L.



Sedum anopetalum DC.



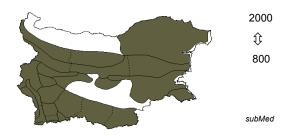
Sedum atratum



Sedum caespitosum (Cav.) DC.



Sedum cepaea



Sedum confertiflorum Boiss.



Sedum dasyphyllum



Sedum hispanicum



Sedum kostovii



Sedum magellense $_{\text{\tiny Ten.}}$



Sedum maximum

(L.) Suter



Sedum pallidum _{M. Bieb.}



Sedum rubens

800 ${\bf \hat{U}}$ 0 Eur-Med

Sedum sexangulare



Sedum stefco Stef.



Sedum subulatum

(C.A. Mey) Boiss.



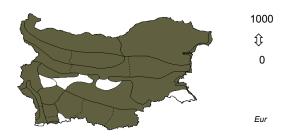
Sedum tenuifolium (Sm.) Strobl

800 Û 0

Sedum tuberiferum Stoj. & Stef.



$\underset{\mathrm{DC.}}{\text{Sedum urvillei}}$

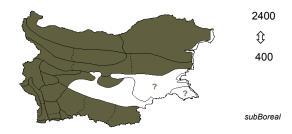


Sedum zollikoferi

F. Hernm. & Stef.



$\underset{(L.)\;\mathrm{Spring}}{\mathsf{Selaginella}}\;\mathsf{helvetica}$



Selaginella selaginoides



Selinum carvifolia

(L.) L.



subMed

$\underset{Craib}{\mathsf{Craib}}$



$\underset{\mathrm{Velen.}}{\mathsf{Sempervivum}} \ \text{erythraeum}$



Sempervivum leucanthum Pančić



$\underset{Griseb.}{\textbf{Sempervivum marmoreum}}$



Sempervivum zeleborii Schott



Senecio abrotanifolius



Senecio aquaticus



Senecio cineraria



Senecio doria



Senecio doronicum

(L.) L.



Senecio erucifolius

2900 Û 200

Senecio inaequidens $_{\mathrm{DC.}}$



Senecio jacobaea



Senecio macedonicus Griseb.



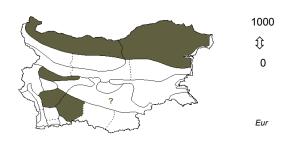
Senecio nemorensis



Senecio othonnae

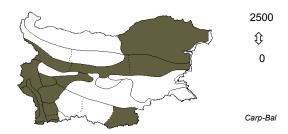


Senecio paludosus



Senecio pancicii Degen

Senecio papposus (Rchb.) Less.



Senecio rupestris Waldst. & Kit.



Senecio subalpinus $_{ m Koch}$



Senecio sylvaticus $_{\scriptscriptstyle \rm L.}$



Senecio vernalis

Waldst. & Kit.



Senecio viscosus $_{\scriptscriptstyle L.}$



Senecio vulgaris



Serapias vomeracea

(Burm.) Briq.

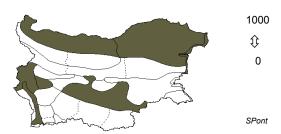


Serratula bulgarica Acht. & Stoj.



Serratula radiata

(Waldst. & Kit.) M. Bieb.



Serratula tinctoria

1500 ${\bf \hat{v}}$ 500

Seseli annuum

Eur-Sib



Seseli bulgaricum P. W. Ball

1800 **Û** 1000

Bul

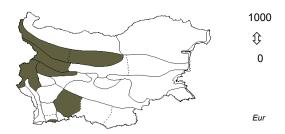
Seseli degenii

800 **Û** 600 Bul

Seseli libanotis (L.) Koch



Seseli pallasii



Seseli peucedanoides (M. Bieb.) Koso-Pol.



Seseli rhodopaeum $_{\mathrm{Velen.}}$



Seseli rigidum Waldst. & Kit.



Seseli tortuosum



Sesleria alba



Sesleria argentea (Savi) Savi



Sesleria autumnalis

(Scop.) F. W. Schultz



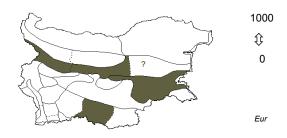
Sesleria bielzii

Schur



Sesleria caerulea

(L.) Ard.



Sesleria coerulans



Sesleria comosa Velen.



Sesleria filifolia

Hoppe



Sesleria korabensis

(Kumm. & Jav.) Deyl



Sesleria latifolia

(Adamović) Degen



Sesleria rhodopaea Tashev & Dimitrov



Sesleria rigida Heuffel ex Rchb.



Sesleria robusta Schott, Nym. & Kotschi



Sesleria tenuifolia Schrad.



Sesleria uliginosa $_{\mathrm{Opiz}}$



Setaria italica (L.) P. Beauv.



Setaria pumila (Poir.) Schult.



Setaria verticillata

(L.) P. Beauv.



Setaria viridis

(L.) P. Beauv.



Sherardia arvensis



Sibbaldia parviflora $_{\mathrm{Willd.}}^{\mathrm{Willd.}}$



Sibbaldia procumbens $_{\scriptscriptstyle \rm L.}$



Sicyos angulatus



Sideritis lanata



Sideritis montana



Sideritis scardica Griseb.



Sideritis syriaca



Sieglingia decumbens (L.) Bernh.



Silaum silaus

(L.) Schinz & Thell.



Silene acaulis

(L.) Jacq.



Silene alba

(Mill.) E. Krause



Silene alpina (Lam.) E. Thomas



Silene armeria



Silene asterias

Griseb.



Silene balcanica

(Urum.) Hayek



Silene borysthenica (Gruner) Walters



Silene bupleuroides Chater & Walters



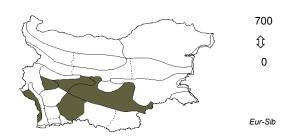
Silene caliacrae

Jordanov & Panov



Silene chlorantha

(Willd.) Ehrh.



Silene ciliata

Pourret



Silene compacta



Silene conica



Silene cretica

L.



Silene csereii

Baumg.



Silene densiflora

D'Urv.



Silene dichotoma



Silene dioica



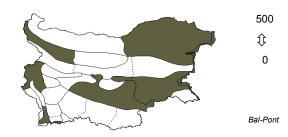
Silene euxina

(Rupr.) Hand.-Mazz.



Silene exaltata

Friv.



Silene fabarioides

Hausskn.



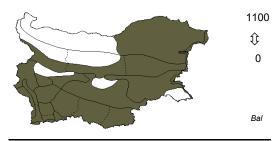
Silene flavescens

Waldst. & Kit.



Silene frivaldszkyana

Hampe



Silene gallica



Silene gallinyi



Silene gigantea



Silene graeca Boiss. & Spruner



Silene heuffelii



Silene italica (L.) Pers.



Silene lerchenfeldiana

2600 t) 200

Silene lydia

Silene moldavica (Klokov) Šourkova

100

th

O

Silene noctiflora



Silene nutans



Silene orbelica

Greuter



Silene otites

(L.) Wibel



Silene pusilla Waldst. & Kit.



Silene radicosa

Boiss. & Heldr.



Silene roemeri



Silene saxifraga



Silene sendtneri

Boiss.



Silene skorpilii _{Velen.}



Silene stojanovii



Silene subconica



Silene supina M. Bieb.



Silene tenuiflora

Guss.



Silene thymifolia $_{\mbox{\tiny Sm.}}$



Silene trojanensis (Velen.) Jordanov & Panov



Silene velcevii

Jordanov & Panov



Silene velenovskyana ^{Jordanov & Panov}



Silene viridiflora

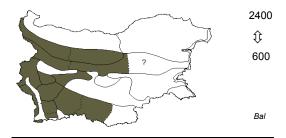


Silene vulgaris (Moench) Garcke



Silene waldsteinii

Griseb.



Silene wolgensis (Hornem.) Otth



Silphium perfoliatum



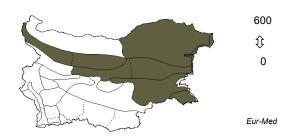
Silybum marianum (L.) Gaertn.



Sinapis arvensis



Sison amomum



Sisymbrium altissimum



Sisymbrium irio



Sisymbrium loeselii

1000 Û
0

$\underset{(L.) \ \mathrm{Scop.}}{\mathsf{Sisymbrium}} \ \text{officinale}$



Sisymbrium orientale

1000 ♀ 0 Eur-As

${\bf Sisymbrium \ polyceratium \ }$



$\underset{(\mathrm{Murr.}) \ \mathrm{Roth}}{\mathsf{Roth}}$



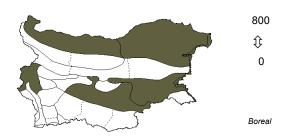
Sisymbrium strictissimum $_{\scriptscriptstyle L.}$



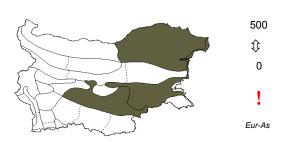
${\color{red} Sisyrinchium\ montanum}_{\tiny Greene}$



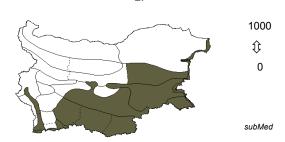
Sium latifolium



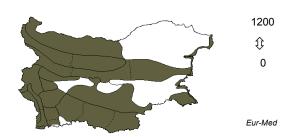
Sium sisarum



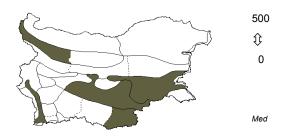
Smilax excelsa



$Smyrnium \underset{\scriptscriptstyle L.}{\text{perfoliatum}}$



$Smyrnium \underset{\tiny Mill.}{rotundifolium}$



Solanum alatum



Solanum cornutum

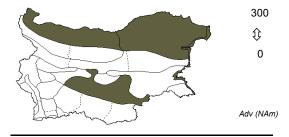


Solanum dulcamara



Solanum heterodoxum

Dunal



Solanum luteum



subMed

Solanum nigrum



Solanum schultesii



Soldanella chrysostricta



Soldanella pindicola Hausskn.



Soldanella pusilla Baumg.



Soldanella rhodopaea

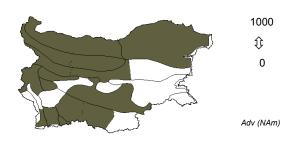
F. K. Mey.



Solidago canadensis



Solidago gigantea



Solidago virgaurea $_{\scriptscriptstyle L.}$



Sonchus arvensis $_{\scriptscriptstyle L.}$



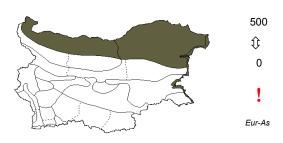
Sonchus asper



Sonchus oleraceus



Sonchus palustris



Sorbus aria

(L.) Crantz



Sorbus aucuparia

2000 Û 600

Sorbus austriaca (Beck) Hedl.

1100 \$\frac{1}{100}\$
800

Sorbus borbasii



Sorbus chamaemespilus (L.) Crantz



Sorbus domestica



Sorbus graeca (Spach) Kotschy



Sorbus mougeotii Soy.-Will. & Godr.



Sorbus torminalis

(L.) Crantz



Sorbus umbellata

(Desf.) Fritsch



Sorghum halepense

(L.) Pers.



$Sparganium \ angustifolium \\ {\rm \tiny Michx.}$



Sparganium emersum

Rehmann



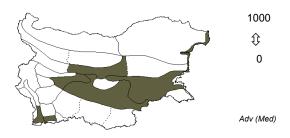
Sparganium erectum



Sparganium minimum Wallr.



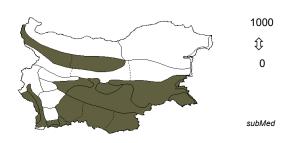
Spartium junceum



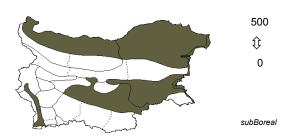
Spergula arvensis



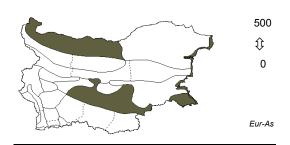
Spergula pentandra



Spergularia marina (L.) Griseb.



Spergularia media (L.) C. Presl



Spergularia rubra (L.) J. & C. Presl

2000 \$\tilde{\text{t}}
0

subBoreal

Spiraea chamaedryfolia



Spiraea crenata

500 Û 0 Pont

Spiraea hypericifolia



Spiraea media F. W. Schmidt

2000 **Û** 500 Pont-Sib

Spiraea pseudosalicifolia Silverside



Spiraea salicifolia



Spiranthes spiralis (L.) Chevall.



Spirodela polyrhiza

(L.) Schleid.



Sporobolus indicus (L.) R. Br.



Stachys alpina



Stachys angustifolia M. Bieb.



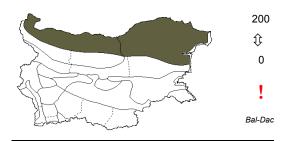
Stachys anisochila Vis. & Pančić



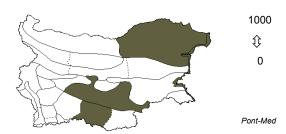
Stachys annua



Stachys arenariaeformis Rouy



Stachys atherocalyx C. Koch



Stachys baldaccii (Maly) Hand.-Mazz.



Stachys beckeana Dörfl. & Hayek



Stachys cassia (Boiss.) Boiss.



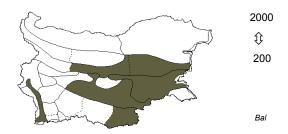
Stachys cretica



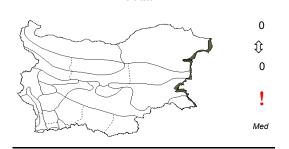
Stachys germanica



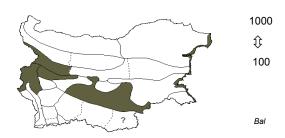
${\color{blue} \textbf{Stachys leucoglossa}}_{\tiny \textbf{Griseb.}}$



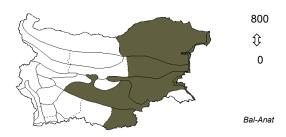
Stachys maritima



Stachys milanii



Stachys obliqua Waldst. & Kit.



Stachys palustris



Stachys plumosa Griseb.



Stachys recta



Stachys serbica



Bal

Stachys sylvatica



Stachys thracica



Stachys thymphaea Hausskn.

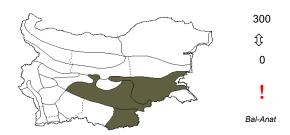


Staphylea pinnata



Stefanoffia daucoides

(Boiss.) H. Wolff



Stellaria alsine

Grimm



Stellaria cupaniana

(Jord. & Fourr.) Bég.



Stellaria graminea



Stellaria holostea



Stellaria media

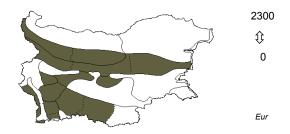
(L.) Vill.



Stellaria neglecta



Stellaria nemorum



Stellaria pallida (Dumort.) Piré



Stellaria palustris



Steptorhamphus tuberosus (Jacq.) Grossh.



Sternbergia colchiciflora Waldst. & Kit.



Stipa balcanica (Martinovský) Kožuharov



Stipa borysthenica Klokov ex Prokudin



Stipa capillata

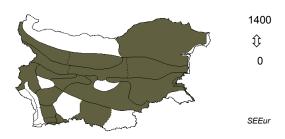


Stipa crassiculmis

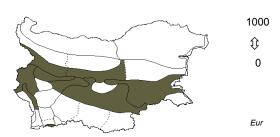
P. A. Smirn.



Stipa epilosa Martinovský



Stipa eriocaulis



Stipa lessingiana Trin. & Rupr.



Stipa pennata



Stipa pontica P. A. Smirn.



Stipa pulcherrima



Stipa tirsa



Stipa ucrainica



Stratiotes aloides

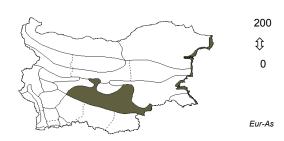


Streptopus amplexifolius $_{(L.)\;\mathrm{DC.}}$



Suaeda altissima

(L.) Pall.



Suaeda heterophylla (Kar. & Kir.) Bunge



Suaeda maritima

(L.) Dumort.



Subularia aquatica



Succisa pratensis



Swertia perennis



Swertia punctata



Symphoricarpos albus (L.) S.F. Blake



Symphyandra wanneri (Rochel) Heuffel



$\underset{\text{Schim.}}{\text{Symphytum bulbosum}}$



$\label{eq:Symphytum officinale} Symphytum \ officinale$



$\label{eq:Symphytum orientale} Symphytum orientale$

50 1 0

$\underset{\text{Friv.}}{\text{Symphytum ottomanum}}$



Symphytum tauricum willd.



Symphytum tuberosum

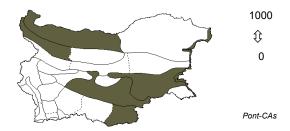


Syringa vulgaris

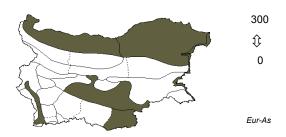




Taeniatherum crinitum (Schreb.) Nevski

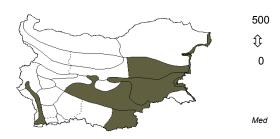


Tamarix ramosissima



Tamarix tetrandra

Pall. ex M. Bieb.



Tamus communis

1200 Û
0

Tanacetum achilleifolium

(M. Bieb.) Sch.Bip.



Tanacetum corymbosum (L.) Sch.Bip.

Tanacetum macrophyllum (Waldst. & Kit.) Sch.Bip.

2000 Û
0

Tanacetum millefolium

(L.) Tzvelev



Tanacetum parthenium (L.) Sch.Bip.



Tanacetum vulgare



Taraxacum aequilobiforme v. Soest



Taraxacum ambitiosum Kirschner & Štěpánek



Taraxacum apenninum

(Ten.) Ten.

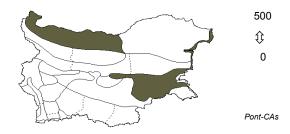


Taraxacum apiculatoides



Taraxacum bessarabicum

(Hornem.) Hand.-Mazz.



Taraxacum bithynicum _{DC.}



Taraxacum borovezum



Taraxacum bulgaricum Soest



Taraxacum carinthiacum

v. Soest



Taraxacum crassum

H. Øllg. & Trávníček



Taraxacum crocellum

v. Soest



Taraxacum dorchocarpum Soest



Taraxacum erytrospermum

Andrz. ex Besser



Taraxacum floribundum



Taraxacum fontanosquameum

v. Soest



Taraxacum fontanum

Hand.-Mazz.



Taraxacum glaucolivaceum Kirschner & Štěpánek



Taraxacum hamosium



Taraxacum helveticum

v. Soest



Taraxacum hoppeanum Griseb.



Taraxacum hybernum Steven



Taraxacum insolitum

Kirschner, C. E. Sonck & Štěpánek



Taraxacum lentum

Kirschner & Štěpánek



Taraxacum lividum

(Waldst. & Kit.) Peterm.



Taraxacum malowitzum



Taraxacum mattmarkense

v. Soest



Taraxacum megalorrhizon (Forssk.) Hand.-Mazz.



Taraxacum melancholicum

Kirschner & Štěpánek



Taraxacum metriocallosum

v. Soest



Taraxacum nigricans

(Kit.) Rchb.



Taraxacum obuncum

Kirschner & Štěpánek



Taraxacum ochrospermum v. Soest



Taraxacum officinale



Taraxacum ooststroomii

v. Soest



Taraxacum paludosiforme



Taraxacum palustre (Lyons) Symons



Taraxacum panalpinum v. Soest



$Taraxacum \underset{\tiny Doll}{plovdivense}$



Taraxacum poliochloroides



Taraxacum pseudofontanum v. Soest



$Taraxacum\ pseudo-vernelense$



Taraxacum refectum



Taraxacum reophilum

v. Soest



Taraxacum rhaeticum

v. Soest



Taraxacum rivale

Dol1



Taraxacum saasense

v. Soest



Taraxacum scaturiginosum

G. E. Haglund



Taraxacum serotinum

(Waldst. & Kit.) Poir.



Taraxacum silvicolum

v. Soest



Taraxacum silvrettense

v. Soest



Taraxacum sitnjakovense



Taraxacum sophiae Kirschner & Štěpánek

1200 ⊕
800

Taraxacum strictum

Kirschner & Štěpánek



Taraxacum subudum

Kirschner & Štěpánek



Taraxacum suspectum

Kirschner & Štěpánek



Taraxacum thracicum

Soes



Taraxacum turfosiforme

Kirschner & Štěpánek



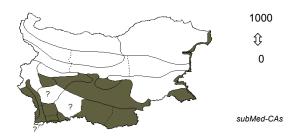
Taraxacum vindobonense



Taxus baccata



Teesdalia coronopifolia (J. P. Bergeret) Thell.



Telekia speciosa (Schreb.) Baumg.



Tetragonolobus maritimus



Teucrium botrys

L.



Teucrium chamaedrys $_{\scriptscriptstyle L.}$

1500 ①
0

subMed

Teucrium lamiifolium

D'Urv.



Teucrium montanum

Teucrium polium

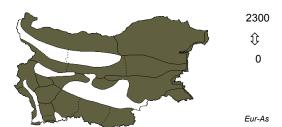


Teucrium scordium

1500 **Û**

subMed

Thalictrum aquilegifolium



Thalictrum flavum



Thalictrum foetidum



Thalictrum lucidum



Thalictrum minus



Thalictrum simplex



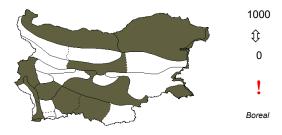
Theligonum cynocrambe



Thelypteris phegopteris $_{(L.)\ \mathrm{Sloss.}}^{}$



Thelypteris thelypteroides (F. Michx.) Holub



Thesium alpinum



Thesium arvense



Thesium bavarum



Thesium divaricatum Jan ex Mert & Koch



Thesium dollineri



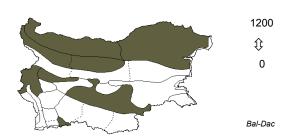
The sium linophyllon $_{\scriptscriptstyle L.}$



Thesium procumbens C. A. Mey



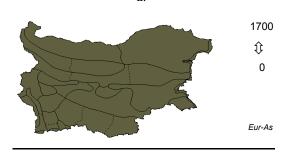
$\begin{array}{c} \text{The sium simplex} \\ \text{}_{\text{Velen.}} \end{array}$



Thlaspi alliaceum



Thlaspi arvense



Thlaspi bellidifolium



Thlaspi goesingense



Thlaspi kovatsii



Thlaspi ochroleucum Boiss. & Heldr.



Thlaspi perfoliatum



Thlaspi praecox



Thlaspi viridisepalum (Podp.) Greuter & Burdet



Thymelaea bulgarica

Cheschm.



Thymelaea gussonei

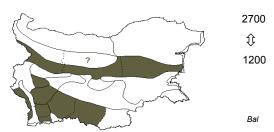


Thymelaea passerina (L.) Coss. & Germ.

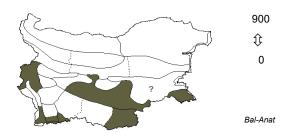
1000 ${\bf \hat{U}}$ 0 Pont

Thymus albanus

Heinr. Braun



Thymus atticus



Thymus bracteosus

Vis. ex Benth.



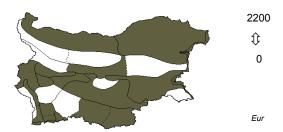
Thymus callieri Borbás ex Velen.



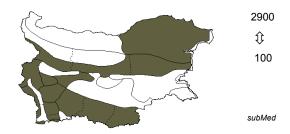
Thymus comptus Friv.



Thymus glabrescens Willd.



Thymus jankae _{Čelak.}



Thymus leucotrichus

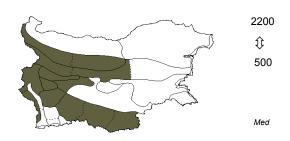
Halácsy



Thymus longedentatus (Degen & Urum.) Ronniger



Thymus longicaulis



Thymus moesiacus



Thymus pannonicus



Thymus perinicus (Velen.) Jalas



Thymus pulegioides $_{\scriptscriptstyle L.}$



Thymus sibthorpii



Thymus stojanovii



Thymus striatus



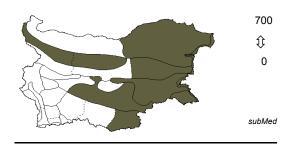
Thymus thracicus Velen.



Thymus vandasii _{Velen.}



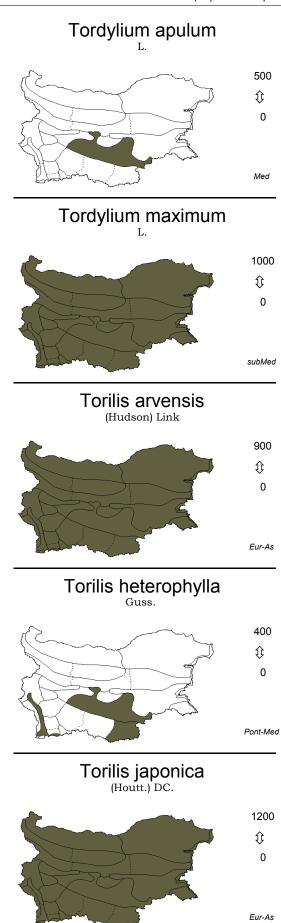
Thymus zygioides Griseb.



Conspectus of the vascular flora of Bulgaria Tilia cordata 1500 **Û** 0 Eur Tilia platyphyllos 1600 $\hat{\mathbf{t}}$ 500 Eur Tilia rubra DC. 1000 Û 0 Pont Tilia tomentosa Moench 1500 **Û** 800

Tolpis barbata

(L.) Gaertn.



Eur-Med

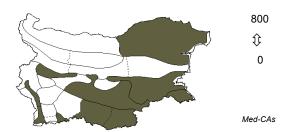
1000

Û

0

Med

Torilis leptophylla (L.) Rchb. f.



Torilis nodosa (L.) Gaertn.



Torilis ucranica Spreng.



Tozzia carpatica Waloszcz.



Trachelium rumelianum Hampe



Trachomitum venetum

(L.) Woodson



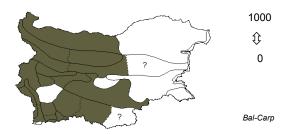
Trachynia distachya (L.) Link



Trachystemon orientalis (L.) G. Don



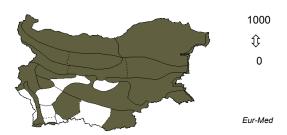
Tragopogon balcanicum _{Velen.}



Tragopogon crocifolius

800 $\hat{\mathbf{t}}$ 800 Med

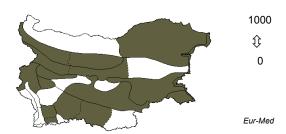
$\underset{\text{Scop.}}{\text{Tragopogon dubius}}$



Tragopogon floccosus Waldst. & Kit.



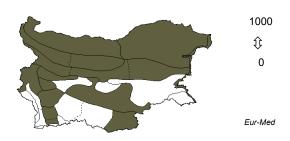
Tragopogon orientalis



Tragopogon porrifolius



Tragopogon pratensis



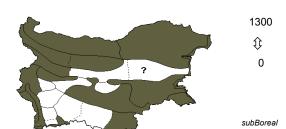
Tragopogon pterodes



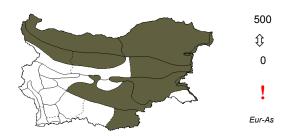
Tragopogon strybrnyi



Tragus racemosus



Trapa natans



Traunsteinera globosa (L.) Rchb.



Tremastelma palaestinum (L.) Janch.



Tribulus terrestris



Trichophorum caespitosum (L.) Hartm.



Trifolium affine C. Presl



Trifolium alexandrinum



Trifolium alpestre

L.



Trifolium angustifolium

1000 tr 0

Trifolium arvense

L.



Trifolium aureum

2200 tt 0

Trifolium badium

Schreb.



Trifolium bocconei



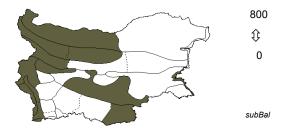
Trifolium campestre Schreb



Trifolium cherleri



Trifolium dalmaticum



Trifolium diffusum Ehrh.



Trifolium dubium



Trifolium echinatum M. Bieb.



$Trifolium \underset{\scriptscriptstyle L.}{\text{fragiferum}}$



$Trifolium \underset{\rm L.}{\text{globosum}}$

500 ${\bf \hat{v}}$ 0 Bal-Anat

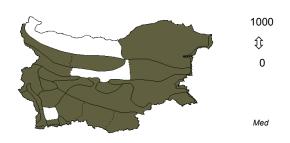
Trifolium glomeratum

500 ${\bf \hat{U}}$ 0 subMed

Trifolium heldreichianum Hausskn.



Trifolium hirtum



Trifolium hybridum



Trifolium incarnatum



Trifolium lappaceum



Trifolium latinum

Sebast.



Trifolium leucanthum

M. Bieb.



Trifolium ligusticum Balb. ex Loisel.

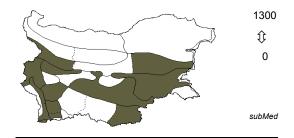


$Trifolium_{\stackrel{L.}{}} medium$



Trifolium michelianum

Savi



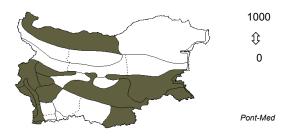
Trifolium micranthum



Trifolium montanum



$Trifolium \underset{Viv.}{nigrescens} \\$



Trifolium ochroleucon



Trifolium pallescens



Trifolium pallidum Waldst. & Kit.



$Trifolium \underset{\rm Jacq.}{pannonicum}$



Trifolium patens Schreb.



Trifolium phleoides Pourret ex Willd.

Trifolium physodes Steven ex M. Bieb.



Trifolium pignantii Fauché & Chaub.



$Trifolium \mathop{pratense}_{\scriptscriptstyle L.}$



Trifolium purpureum Loisel.



$\text{Trifolium repens} \\ _{\text{\tiny L.}}$



Trifolium resupinatum



Trifolium retusum

L.



Trifolium rubens

L.



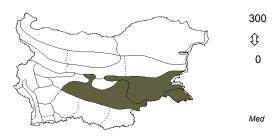
Trifolium scabrum

L.



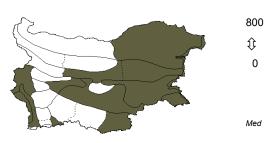
Trifolium sebastianii

Savi



Trifolium setiferum

Boiss.



Trifolium smyrnaeum Boiss.





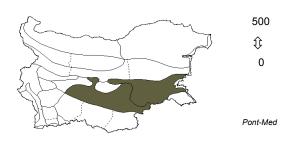
$\begin{array}{c} \text{Trifolium speciosum} \\ \text{\tiny Willd.} \end{array}$



$Trifolium \underset{\scriptscriptstyle L.}{\text{spumosum}}$



$Trifolium \ \underset{\scriptscriptstyle L.}{\text{squamosum}}$



$Trifolium \ \, { squarrosum}_{ \ \, L.}$

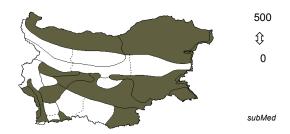


Trifolium striatum

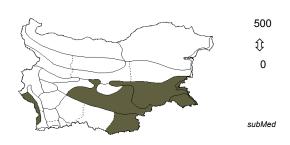


Trifolium strictum

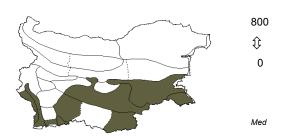
Trifolium subterraneum



Trifolium suffocatum



Trifolium tenuifolium



Trifolium trichopterum



Trifolium velenovskyi Vandas



Triglochin maritima



Triglochin palustris



Trigonella coerulea (L.) Ser.



Trigonella corniculata



Trigonella foenum-graecum



Trigonella gladiata Steven ex M. Bieb.



Trigonella monspeliaca

 ${\bf \hat{U}}$ 0

800

subMed

Trigonella orthoceras Kar. & Kir.



Trigonella procumbens (Besser) Rchb.



Trigonella spicata $_{\mathrm{Sm.}}$



Trigonella striata

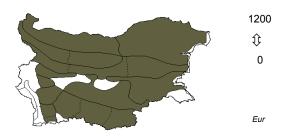


Trinia glauca (L.) Dumort.

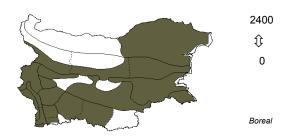


Trinia ramosissima

(Fisch. ex Trev.) Koch

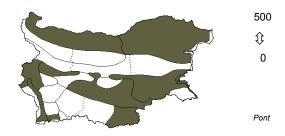


Trisetum flavescens (L.) P. Beauv.

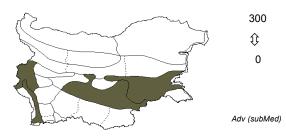


Triticum baeoticum

Boiss.



Triticum monococcum



Trollius europaeus



Tuberaria guttata (L.) Fourr.



Tulipa aureolina Delip.



Tulipa australis



Tulipa pirinica



Tulipa rhodopea Velen.



Tulipa splendens Delip.



Tulipa thracica

100 tì 0

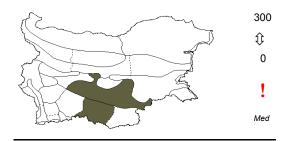
Tulipa urumoffii



Turgenia latifolia



Turgeniopsis foeniculacea (Fenzl) Boiss.



Tussilago farfara



Typha angustifolia



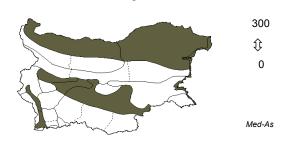
Typha domingensis (Pers.) Steud.



$\text{Typha latifolia} \\ \text{$_{\text{L.}}$}$



Typha laxmanii



Typha schuttleworthii Koch & Sond.



Tyrimnus leucographus (L.) Cass.

1000 Û
0

Ulmus glabra

1500 ①
500

Ulmus laevis

700 Û
0

Ulmus minor



Umbilicus erectus



Umbilicus horizontalis (Guss.) DC.



Umbilicus rupesrtis (Salisb.) Dandy



Urospermum picroides (L.) Scop. ex F. W. Schmidt



Urtica dioica



Urtica pilulifera



Urtica urens



Utricularia australis

200 tr 0

Kos

Utricularia minor



Utricularia vulgaris



Vaccaria hispanica (Mill.) Rasch.



Vaccinium arctostaphylos



Vaccinium myrtillus



$Vaccinium \underset{\scriptscriptstyle L.}{uliginosum}$



Vaccinium vitis-idaea



Valeriana dioscoridis



Valeriana montana



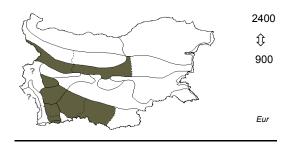
Valeriana officinalis

2200 t) 100 Eur-Sib

Valeriana simplicifolia (Rchb.) Kabath



Valeriana tripteris



Valeriana tuberosa



Valerianella carinata Loisel.



Valerianella coronata (L.) DC.



Valerianella costata (Steven) Betcke



Valerianella dentata (L.) Poll.



Valerianella discoidea

(L.) Loisel.



Valerianella eriocarpa Desv.



Valerianella kotschyi

Boiss.



Valerianella lasiocarpa (Steven) Betcke



Valerianella locusta

(L.) Laterr.



Valerianella microcarpa



Valerianella muricata

(Steven ex M. Bieb.) Loudon



Valerianella pontica



$\underset{(L.)\ \mathrm{DC.}}{\text{Valerianella}}\ pumila$



Valerianella rimosa



Valerianella turgida

(Steven) Betcke



Vallisneria spiralis



Velezia rigida



Ventenata dubia

(Leers) Coss.



Veratrum lobelianum

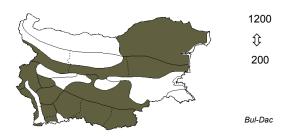
Bernh.



Veratrum nigrum



Verbascum abietinum Borbás



Verbascum adamovičii Velen.



$\mbox{ Verbascum adrianopolitanum } \mbox{ adrianopolitanum } \mbox{ } \m$



Verbascum anisophyllum Murb.



Verbascum banaticum



Verbascum blattaria



Verbascum boevae

Stef.-Gat.



Verbascum bugulifolium



Verbascum chaixii

1000 ${\bf \hat{U}}$ 0 Pann-Bal

Verbascum crenatifolium

800 Û Pont-Med

Verbascum davidoffii Murb.



Verbascum decorum Velen.



Verbascum densiflorum Bertol.



Verbascum dieckianum Borbás & Degen

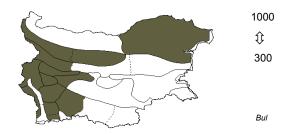


$\begin{tabular}{ll} Verbascum eriophorum \\ & {\tt Godr.} \end{tabular}$



Verbascum formanekii

Borbás ex Formánek



Verbascum glabratum



Verbascum humile

Janka



Verbascum jankaeanum Pančić



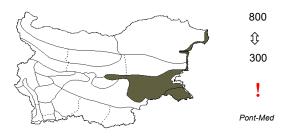
Verbascum jordanovii Stef.-Gat.



$\underset{\text{Stef.}}{\text{Verbascum juruk}}$



Verbascum lagurus Fisch. & C. A. Mey.



Verbascum lanatum Schrad.



Verbascum longifolium



Verbascum lychnitis

$\begin{tabular}{ll} Verbascum & minutiflorum \\ & Stef. \end{tabular}$

1000 t 0 !

Verbascum nigrum

Pont-CAs

Verbascum niveum



Verbascum nobile



Verbascum orientale (L.) All.



Verbascum ovalifolium Donn ex Sims

1000 **Û** 0 Pont-Bal

Verbascum phlomoides



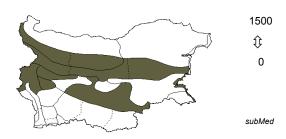
$Verbascum \underset{\scriptscriptstyle L.}{\text{phoeniceum}}$



Verbascum pseudonobile Stoj. & Stef.



$Verbascum \underset{\text{Vill.}}{\text{pulverulentum}}$



Verbascum purpureum (Janka) Hub.-Mor.



Verbascum rorripifolium

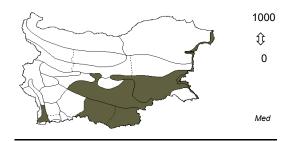
(Halácsy) I. K. Ferguson



Verbascum rupestre (Davidov) I. K. Ferguson



Verbascum sinuatum



Verbascum spathulisepalum Greuter & Rech. f.

Verbascum speciosum Schrad.



Verbascum thracicum _{Velen.}



Verbascum tzar-borisii (Davidov ex Stoj.) Stef.-Gat.



Verbascum urumoffii Stoj. & Acht.



Verbascum xanthophoeniceum Griseb.

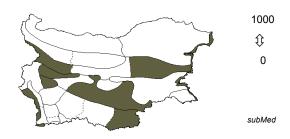


Verbena officinalis



Verbena supina

Veronica acinifolia



Veronica alpina

Veronica anagalis-aquatica



Veronica arvensis



Veronica austriaca



Veronica aznavourii



Veronica barrelieri Schott ex Roem. & Schult.



Veronica baumgartenii

Roem. & Schult.



Veronica beccabunga



Veronica bellidioides

L.



Veronica catenata

Pennell



Veronica chamaedrys

L.



Veronica cymbalaria



Veronica euxina



Veronica filiformis



Veronica fruticans



Veronica fruticulosa



Veronica glauca



Veronica grisebachii Walters



Veronica hederifolia

800 ①

0

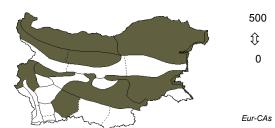
Eur-Med

Veronica kellererii

Veronica krumovii (Peev) Peev



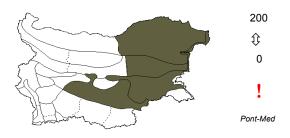
Veronica longifolia



Veronica montana



Veronica multifida



$\mbox{Veronica officinalis}_{_{L.}} \label{eq:controller}$



Veronica orbelica



Veronica orchidea



Veronica pallens



Veronica peregrina

200 Û 0

Veronica persica



Veronica polita



$Veronica \atop {}_{All.} praecox$



Veronica prostrata



Veronica rhodopaea (Velen.) Degen ex Stoj. & Stef.



Veronica scardica Griseb.



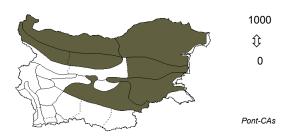
Veronica scutellata



Veronica serpyllifolia



Veronica spuria



Veronica sublobata

M. A. Fisch.



Veronica teucrium

1200 ${\bf \hat{v}}$ 0

Eur-Sib

Veronica trichadena

Jord. & Fourr.



Veronica triloba (Opiz) A. Kern.

800 **Û** 0 subMed

Veronica triphyllos



Veronica turrilliana Stoj. & Stef.



Veronica urticifolia Jacq.



Veronica verna



Veronica vindobonensis

(M. A. Fisch.) M. A. Fisch.



Viburnum lantana

1500 ${\bf \hat{t}}$ 0 Eur-Med

$\mbox{Viburnum opulus} _{\rm L.} \label{eq:L.}$



Vicia abreviata Spreng.

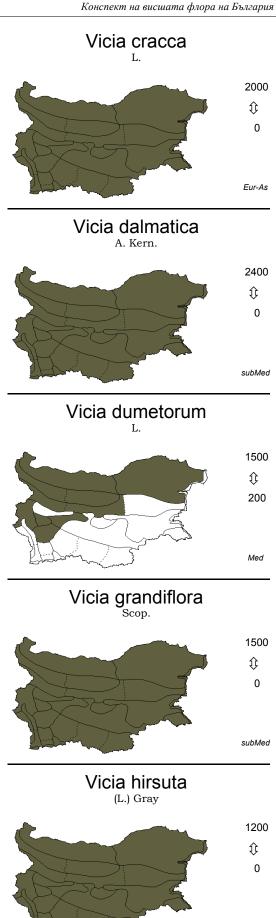


Vicia amphicarpa Dorthes

1300 ${\bf \hat{U}}$

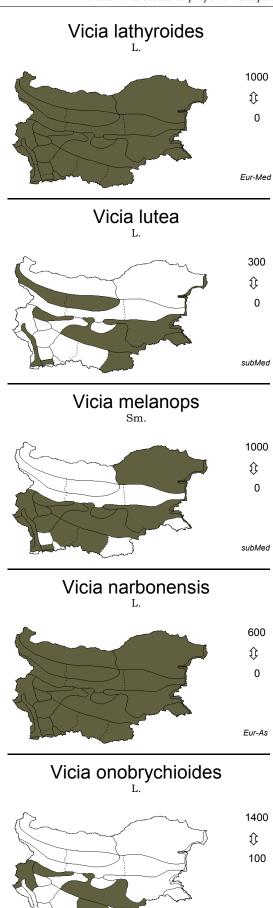


Vicia angustifolia Grufberg 1000 **Û** Vicia articulata Hornem. 300 **Û** 0 subMed Vicia bythinica 500 Û 0 subMed Vicia cassubica 1800 **Û** 0 Eur-Med Vicia cordata Wulfen 500 **Û** 0 Med



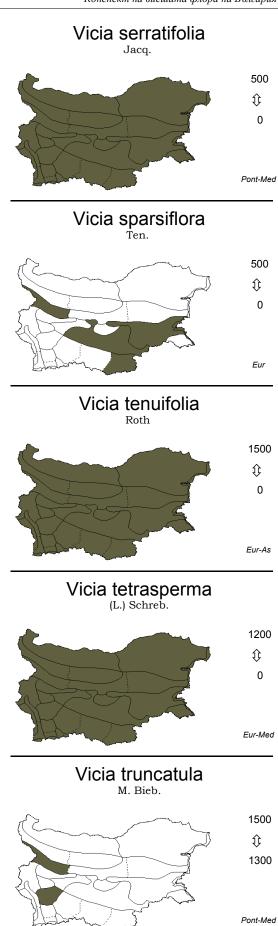
Eur-Med

Vicia hybrida 500 **Û** Med-CAs Vicia incana Gouan 1900 $\hat{\mathbf{t}}$ 1100 Eur Vicia incisa M. Bieb. 100 Û 0 Pont Vicia jordanovii 1000 **Û** 0 Bul Vicia laeta Ces. 300 **Û** 0 Med-subMed



Med

Vicia pannonica Crantz 1500 **Û** 0 Eur-Med Vicia peregrina 1500 Û 0 Eur-As Vicia pisiformis 500 Û 0 Eur Vicia sativa 500 **Û** 0 Eur-Med Vicia sepium 2200 $\hat{\mathbf{t}}$ 300 Eur-As



Vicia varia



Vicia villosa



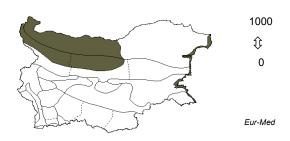
Vinca herbacea Waldst. & Kit.



Vinca major



Vinca minor



Vincetoxicum fuscatum

(Hornem.) Rchb. f.



Vincetoxicum hirundinaria

Medicus



Vincetoxicum nigrum (L.) Moench.



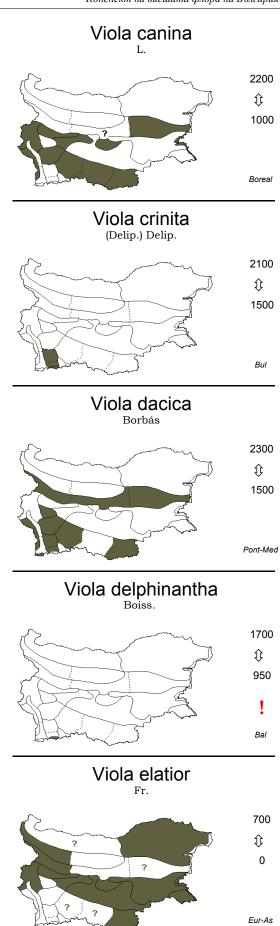
Vincetoxicum speciosum Boiss.



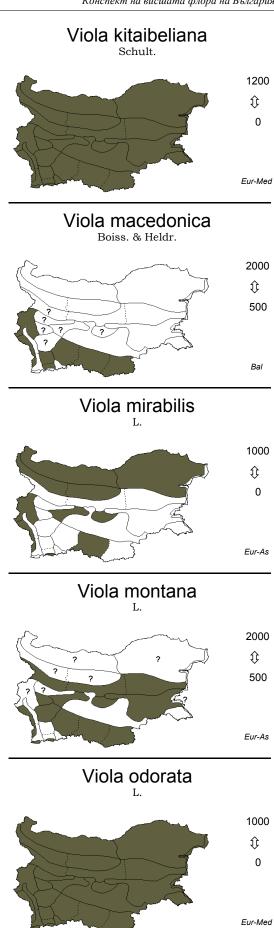
Viola aetolica Boiss. & Heldr.

1500 $\hat{\mathbf{t}}$ 800 Bal

Viola alba Besser 1200 ${\bf \hat{t}}$ 100 Eur-Med Viola ambigua Waldst. & Kit. 1100 $\hat{\mathbf{t}}$ 200 Eur-Sib Viola arvensis Murr. 1500 Û 0 Eur Viola balcanica 2000 ${\bf \hat{t}}$ 1400 Bul Viola biflora 2800 $\hat{\mathbf{t}}$ 1700 Boreal



Viola ganiatsasii 1500 $\hat{\mathbf{t}}$ 500 Viola gracilis 2100 $\hat{\mathbf{t}}$ 1800 Bal-Anat Viola grisebachiana 2800 $\hat{\mathbf{t}}$ 1300 ! Viola hirta 1300 ${\bf \hat{t}}$ 300 Eur-As Viola jordanii 1000 $\hat{\mathbf{t}}$ 200 Eur-Med



Viola orbelica

Pančić



Viola palustris



Viola parvula



Viola perinensis



Viola persicifolia Schreb.



Viola pumila



Viola pyrenaica Ramond ex DC.



Viola reichenbachiana

Jord. ex Boreau



Viola rhodopeia



Viola riviniana Rchb.

1500 $\hat{\mathbf{t}}$ 150 subMed

Viola rupestris F. W. Schmidt



Viola serresiana Erben



Viola sieheana



Viola speciosa



Viola stojanowii



Viola suavis M. Bieb.



Viola tricolor



Viscaria vulgaris

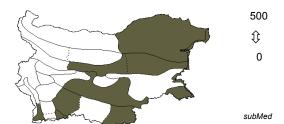


$\mathop{\hbox{Viscum}}_{\scriptscriptstyle L.} \mathop{\hbox{album}}$



Vitex agnus-castus

Vitis sylvestris C. C. Gmel.



Vulpia ambigua (Le Gall) More



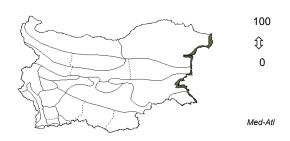
Vulpia bromoides (L.) Gray



Vulpia ciliata



Vulpia fasciculata (Forssk.) Samp.



Vulpia muralis (Kunth) Nees



Vulpia myurus (L.) C. C. Gmel.



Vulpia unilateralis

300 ①

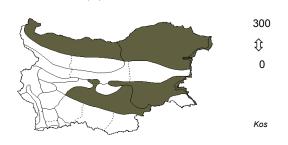
0

Med-Ch

Waldsteinia geoides



Wolffia arrhiza (L.) Horkel ex Wimm.



Xanthium italicum



$Xanthium \underset{\scriptscriptstyle L.}{spinosum}$



Xanthium strumarium



Xeranthemum annuum



Xeranthemum cylindraceum



$Xeranthemum\ inapertum\ _{(L.)\ Mill.}$



Zannichellia palustris



Ziziphora capitata $_{\scriptscriptstyle L.}$

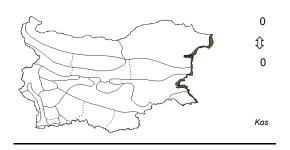
1000 ⊕
0

Med

Ziziphus jujuba



Zostera marina



Zostera noltii Hornem. 0 10 Atl-Med Zygophyllum fabago L. 100 100 Eur-As

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СПИСЪК НА РОДОВЕТЕ И ТЕХНИТЕ СЕМЕЙСТВА LIST OF THE GENERA AND THEIR FAMILIES

Abies - *Pinaceae* Abutilon - *Malvaceae* Acalypha - *Euphorbiaceae* Acanthus - *Acanthaceae*

Acer - Aceraceae Achillea - Asteraceae Achnatherum - Poaceae Acinos - Lamiaceae

Aconitum - Ranunculaceae Acorellus - Cyperaceae

Acorus - Araceae
Actaea - Ranunculaceae
Adenostyles - Asteraceae
Adiantum - Adiantaceae
Adonis - Ranunculaceae
Adoxa - Adoxaceae

Aegilops - Poaceae Aegopodium - Apiaceae Aeluropus - Poaceae

Aesculus - *Hippocastanaceae* Aethionema - *Brassicaceae*

Aethusa - *Apiaceae* Agrimonia - *Rosaceae* Agropyron - *Poaceae*

 ${\bf Agrostemma} \ - \ Caryophyllaceae$

Agrostis - Poaceae

Ailanthus - Simaroubaceae

Aira - Poaceae
Ajuga - Lamiaceae
Alcea - Malvaceae
Alchemilla - Rosaceae
Aldrovanda - Droseraceae
Alisma - Alismataceae
Alkanna - Boraginaceae
Alliaria - Brassicaceae
Allium - Liliaceae
Alnus - Betulaceae
Alopecurus - Poaceae
Althaea - Malvaceae
Alyssoides - Brassicaceae
Alyssum - Brassicaceae

Amaranthus - Amaranthaceae

Ambrosia - Asteraceae
Amelanchier - Rosaceae
Ammannia - Lythraceae
Ammophila - Poaceae
Amorpha - Fabaceae
Amygdalus - Rosaceae
Anacamptis - Orchidaceae
Anagalis - Primulaceae
Anchusa - Boraginaceae
Andrachne - Euphorbiaceae

Androsace - *Primulaceae* Andrzeiowskia - *Brassicaceae* Anemone - *Ranunculaceae*

Anethum - *Apiaceae* Angelica - *Apiaceae* Antennaria - Asteraceae Anthemis - Asteraceae Anthericum - Liliaceae Anthoxanthum - Poaceae Anthriscus - Apiaceae Anthyllis - Fabaceae

Antirrhinum - Scrophulariaceae

Apera - Poaceae Aphanes - Rosaceae Apium - Apiaceae

Aquilegia - Ranunculaceae Arabidopsis - Brassicaceae Arabis - Brassicaceae Arbutus - Ericaceae

Arceutobium - Loranthaceae

Arctium - Asteraceae Arctostaphylos - Ericaceae Aremonia - Rosaceae Arenaria - Caryophyllaceae Argusia - Boraginaceae

Argusia - Boraginaceae
Aristolochia - Aristolochiaceae
Armeria - Plumbaginaceae
Armoracia - Brassicaceae
Arnica - Asteraceae
Arrhenatherum - Poaceae

Artemisia - Asteraceae

Arum - Araceae

Asarum - Aristolochiaceae Asclepias - Asclepiadaceae Asparagus - Liliaceae Asperugo - Boraginaceae Asperula - Rubiaceae Asphodeline - Liliaceae Asphodelus - Liliaceae Asplenium - Aspleniaceae Aster - Asteraceae

Aster - Asteraceae
Asteriscus - Asteraceae
Asterolinon - Primulaceae
Astracantha - Fabaceae
Astragalus - Fabaceae
Astrantia - Apiaceae
Astrodaucus - Apiaceae
Astrodaucus - Apiaceae
Astrodaucus - Apiaceae
Athyrium - Athyriaceae
Athyrium - Athyriaceae
Atriplex - Chenopodiaceae
Atropa - Solanaceae
Aurinia - Brassicaceae
Avena - Poaceae
Avenula - Poaceae

Avena - Poaceae
Avenula - Poaceae
Azolla - Azollaceae
Ballota - Lamiaceae
Barbarea - Brassicaceae
Bartsia - Scrophulariaceae
Bassia - Chenopodiaceae
Beckmannia - Poaceae
Bellardia - Scrophulariaceae

Bellardiochloa - Poaceae Bellevalia - Liliaceae Bellis - Asteraceae Berberis - Berberidaceae Berteroa - Brassicaceae

Berula - Apiaceae Beta - Chenopodiaceae Betonica - Lamiaceae Betula - Betulaceae Bidens - Asteraceae Bifora - Apiaceae

Bilderdykia - Polygonaceae Biserrula - Fabaceae

Bistorta - Polygonaceae Bituminaria - Fabaceae Blackstonia - Gentianaceae Blechnum - Blechnaceae Blysmus - Cyperaceae

Bolboschoenus - Cyperaceae Bombycilaena - Asteraceae Botrychium - Ophioglossaceae

Brachiaria - Poaceae Brachypodium - Poaceae Brassica - Brassicaceae

Briza - Poaceae Bromus - Poaceae

Broussonetia - Moraceae Bruckenthalia - Ericaceae Bryonia - Cucurbitaceae Bufonia - Caryophyllaceae Buglossoides - Boraginaceae

Bunias - Brassicaceae Bunium - Apiaceae Bupleurum - Apiaceae Butomus - Butomaceae Cachrys - Apiaceae Cakile - Brassicaceae Calamagrostis - Poaceae Calamintha - Lamiaceae Caldesia - Alismataceae Calendula - Asteraceae Calepina - Brassicaceae Callitriche - Callitrichaceae

Calluna - Ericaceae Caltha - Ranunculaceae Calystegia - Convolvulaceae Camelina - Brassicaceae Campanula - Campanulaceae Camphorosma - Chenopodiaceae

Cannabis - Cannabaceae Capsella - Brassicaceae Caragana - Fabaceae Cardamine - Brassicaceae Cardaminopsis - Brassicaceae

Cardaria - Brassicaceae Carduus - Asteraceae Carex - Cyperaceae Carlina - Asteraceae Carpesium - Asteraceae Carpinus - Betulaceae Carthamus - Asteraceae

Carum - Apiaceae Castanea - Fagaceae Catabrosa - Poaceae Catalpa - Bignoniaceae Caucalis - Apiaceae Celtis - Ulmaceae Cenchrus - Poaceae Centaurea - Asteraceae Centaurium - Gentianaceae

Cephalanthera - Orchidaceae Cephalaria - Dipsacaceae Cephalorrhynchus - Asteraceae Cerastium - Caryophyllaceae

Centranthus - Valerianaceae

Ceratocarpus - Chenopodiaceae Ceratocephalus - Ranunculaceae Ceratophyllum - Ceratophyllaceae

Cercis - Fabaceae Cerinthe - Boraginaceae Ceterach - Aspleniaceae

Chaenorhinum - Scrophulariaceae

Chaerophyllum - Apiaceae Chamaecytisus - Fabaceae Chamaespartium - Fabaceae Cheilanthes - Sinopteridaceae Chelidonium - Papaveraceae Chenopodium - Chenopodiaceae

Chondrilla - Asteraceae Chorispora - Brassicaceae Chrozophora - Euphorbiaceae Chrysopogon - Poaceae

Chrysosplenium - Saxifragaceae

Cicer - Fabaceae Cicerbita - Asteraceae Cichorium - Asteraceae Cicuta - Apiaceae

Cionura - Asclepiadaceae Circaea - Onagraceae Cirsium - Asteraceae Cistus - Cistaceae Citrullus- Cucurbitaceae Cladium - Cyperaceae Cleistogenes - Poaceae Clematis - Ranunculaceae Cleome - Capparidaceae Clinopodium - Lamiaceae

Clypeola - Brassicaceae Cnicus - Asteraceae

Cnidium - Apiaceae

Coeloglossum - Orchidaceae

Colchicum - Liliaceae Colutea - Fabaceae Comandra - Santalaceae Commelina - Commelinaceae

Conium - Apiaceae Conringia - Brassicaceae Consolida - Ranunculaceae Convallaria - Liliaceae

Convolvulus - Convolvulaceae

Conyza - Asteraceae Corallorhiza - Orchidaceae

Coriandrum - *Apiaceae*

Corispermum - Chenopodiaceae

Cornus - Cornaceae Coronilla - Fabaceae Coronopus - Brassicaceae Corothamnus - Fabaceae Corrigiola - Caryophyllaceae

Cortusa - Primulaceae
Corydalis - Papaveraceae
Corylus - Betulaceae
Corynephorus - Poaceae
Cotinus - Anacardiaceae
Cotoneaster - Rosaceae
Crambe - Brassicaceae
Crassula - Crassulaceae
Crataegus - Rosaceae
Crepis - Asteraceae
Cressa - Convolvulaceae
Crithmum - Apiaceae
Crocus - Iridaceae
Crucianella - Rubiaceae

Cryptogramma - Cryptogrammaceae

Cucubalus - Caryophyllaceae

Cuscuta - Cuscutaceae Cyclamen - Primulaceae

Cruciata - Rubiaceae

Crupina - Asteraceae

Crypsis - Poaceae

Cymbalaria - Scrophulariaceae Cynanchum - Asclepiadaceae

Cynodon - Poaceae

Cynoglossum - Boraginaceae

Cynosurus - Poaceae
Cyperus - Cyperaceae
Cypripedium - Orchidaceae
Cystopteris - Athyriaceae
Cytinus - Rafflesiaceae
Dactylis - Poaceae

Dactylorhiza - Orchidaceae

Danthonia - Poaceae

Danthoniastrum - Poaceae
Daphne - Thymeleaceae
Dasypyrum - Poaceae
Datura - Solanaceae
Daucus - Apiaceae

Delphinium - Ranunculaceae Deschampsia - Poaceae

Descurainia - Brassicaceae Desmazeria - Poaceae Dianthus - Caryophyllaceae

Dichanthium - *Poaceae*Dichostylis - *Cyperaceae*

Dictamnus - *Rutaceae* Digitalis - *Scrophulariaceae*

Digitaria - Poaceae

Diphasiastrum - Lycopodiaceae

Diplotaxis - Brassicaceae
Dipsacus - Dipsacaceae
Dittrichia - Asteraceae
Doronicum - Asteraceae
Dorycnium - Fabaceae
Draba - Brassicaceae

Dracocephalum - Lamiaceae Dracunculus - Araceae Drosera - Droseraceae

Dryas - Rosaceae

Dryopteris - Aspidiaceae Duchesnea - Rosaceae Ecballium - Cucurbitaceae

Echinaria - *Poaceae* Echinochloa - *Poaceae*

Echinocystis - Cucurbitaceae Echinophora - Apiaceae Echinops - Asteraceae Echium - Boraginaceae Eclipta - Asteraceae

Edraianthus - Campanulaceae

Elatine - Elatinaceae Elaeagnus - Elaeagnaceae Eleocharis - Cyperaceae Eleusine - Poaceae

Elodea - Hydrocharitaceae

Elymus - Poaceae

Empetrum - Empetraceae
Ephedra - Ephedraceae
Epilobium - Onagraceae
Epimedium - Berberidaceae
Epipactis - Orchidaceae
Epipogium - Orchidaceae

Equisetum - Equisetaceae
Eragrostis - Poaceae
Eranthis - Ranunculaceae
Erianthus - Poaceae
Erica - Ericaceae
Erigeron - Asteraceae

Erigeron - Asteraceae
Eriolobus - Rosaceae
Eriophorum - Cyperaceae
Erodium - Geraniaceae
Erophila - Brassicaceae
Eruca - Brassicaceae
Eryngium - Apiaceae
Erysimum - Brassicaceae
Erysthronium - Liliaceae
Euclidium - Brassicaceae
Eupatorium - Asteraceae
Euphorbia - Euphorbiaceae

Euphorbia - *Euphorbiaceae*Euphrasia - *Scrophulariaceae*Evonymus - *Celastraceae*

Fagus - Fagaceae Falcaria - Apiaceae Fallopia – Polygonaceae

Ferula - *Apiaceae* Ferulago - *Apiaceae* Festuca - *Poaceae* Festulolium - Poaceae
Fibigia - Brassicaceae
Ficus - Moraceae
Filaginella - Asteraceae
Filago - Asteraceae
Filipendula - Rosaceae
Fimbristylis - Cyperaceae
Foeniculum - Apiaceae
Fragaria - Rosaceae
Frangula - Rhamnaceae
Frankenia - Frankeniaceae

Fraxinus - Oleaceae Fritillaria - Liliaceae Fumana - Cistaceae Fumaria - Papaveraceae Gagea - Liliaceae

Galanthus - Amaryllidaceae

Galega - Fabaceae
Galeopsis - Lamiaceae
Galilea - Cyperaceae
Galinsoga - Asteraceae
Galium - Rubiaceae
Gastridium - Poaceae
Gaudinia - Poaceae
Genista - Fabaceae
Gentiana - Gentianaceae
Gentianella - Gentianaceae
Geranium - Geraniaceae

Geum - Rosaceae Gladiolus - Iridaceae Glaucium - Papaveraceae Glechoma - Lamiaceae Gleditsia - Fabaceae Glinus - Molluginaceae Globularia - Globulariaceae Glyceria - Poaceae

Glycyrrhiza - Fabaceae
Gnaphalium - Asteraceae
Goniolimon - Plumbaginaceae
Goodyera - Orchidaceae
Gratiola - Scrophulariaceae
Groenlandia - Potamogetonaceae
Gymnadenia - Orchidaceae
Gymnocarpium - Aspidiaceae
Gypsophila - Caryophyllaceae
Haberlea - Gesneriaceae

Hainardia - Poaceae

Halimione - Chenopodiaceae
Hammarbya - Orchidaceae
Haplophyllum - Rutaceae
Hedera - Araliaceae
Hedypnois - Asteraceae
Hedysarum - Fabaceae
Helianthemum - Cistaceae
Helianthus - Asteraceae
Helichrysum - Asteraceae
Heliotropium - Boraginaceae
Helleborus - Ranunculaceae

Hepatica - Ranunculaceae

Heptaptera - Apiaceae Heracleum - Apiaceae Herminium - Orchidaceae Herniaria - Caryophyllaceae Hesperis - Brassicaceae Heteranthera - Pontederiaceae

Hibiscus - *Malvaceae* Hieracium - *Asteraceae* Hierochloe - *Poaceae*

Himantoglossum - Orchidaceae

Hippocrepis - Fabaceae Hippomarathrum - Apiaceae Hippophae - Elaeagnaceae Hippuris - Hippuridaceae

Holcus - Poaceae

Holoschoenus - Cyperaceae Holosteum - Caryophyllaceae

Homogyne - Asteraceae Hordelymus - Poaceae Hordeum - Poaceae Hornungia - Brassicaceae Hottonia - Primulaceae Huetia - Apiaceae

Humulus - *Cannabaceae* Huperzia - *Lycopodiaceae* Hyacinthella - *Liliaceae*

Hydrocharis - Hydrocharitaceae
Hymenocarpus - Fabaceae
Hymenolobus - Brassicaceae
Hyoscyamus - Solanaceae
Hypecoum - Papaveraceae
Hypericum - Hypericaceae
Hypochaeris - Asteraceae
Hyssopus - Lamiaceae
Iberis - Brassicaceae
Ilex - Aquifoliaceae

Impatiens - Balsaminaceae

Imperata - Poaceae Inula - Asteraceae Iris - Iridaceae Isatis - Brassicaceae Isoetes - Isoetaceae Isolepis - Cyperaceae Isopyrum - Ranunculaceae

Iva - Asteraceae

Jasione - Campanulaceae
Jasminum - Oleaceae
Jovibarba - Crassulaceae
Juglans - Juglandaceae
Juncus - Juncaceae
Juniperus - Cupressaceae
Jurinea - Asteraceae
Kernera - Brassicaceae
Kickxia - Scrophulariaceae
Knautia - Dipsacaceae
Kobresia - Cyperaceae
Kochia - Chenopodiaceae

Koeleria - Poaceae

Koelreuteria – Sapindaceae

Lactuca - Asteraceae
Lagoecia - Apiaceae
Lagurus - Poaceae
Lamium - Lamiaceae
Lappula - Boraginaceae
Lapsana - Asteraceae
Laser - Apiaceae
Laserpitium - Apiaceae
Lathraea - Scrophulariaceae

Lathyrus - Fabaceae
Laurocerasus - Rosaceae
Lavandula - Lamiaceae
Lavatera - Malvaceae
Leersia - Poaceae

Legousia - Campanulaceae Lembotropis - Fabaceae Lemna - Lemnaceae Lens - Fabaceae

Leontice - Berberidaceae Leontodon - Asteraceae Leontopodium - Asteraceae Leonurus - Lamiaceae Lepidium - Brassicaceae Lepidotrichum - Brassicaceae

Lerchenfeldia - Poaceae Leucanthemella - Asteraceae Leucanthemum - Asteraceae Leucojum - Amaryllidaceae

Leymus - Poaceae Ligularia - Asteraceae Ligusticum - Apiaceae Ligustrum - Oleaceae Lilium - Liliaceae

Limodorum - Orchidaceae Limonium - Plumbaginaceae Limosella - Scrophulariaceae Linaria - Scrophulariaceae Lindernia - Scrophulariaceae

Linum - Linaceae Liparis - Orchidaceae Listera - Orchidaceae

 ${\bf Lithospermum} \ - \ Boraginaceae$

Lloydia - Liliaceae Logfia - Asteraceae Lolium - Poaceae

Lonicera - Caprifoliaceae Lophochloa - Poaceae Loranthus - Loranthaceae Lotononis - Fabaceae Lotus - Fabaceae Ludwigia - Onagraceae Lunaria - Brassicaceae Lupinus - Fabaceae Luzula - Juncaceae

Lychnis - Caryophyllaceae Lycium - Solanaceae

Lycopodiella - Lycopodiaceae Lycopodium - Lycopodiaceae Lycopodium - Dorggingaege

Lycopsis - Boraginaceae

Lycopus - Lamiaceae Lysimachia - Primulaceae Lythrum - Lythraceae Mahonia - Berberidaceae Malabayla - Apiaceae Malcolmia - Brassicaceae

Malus - Rosaceae
Malva - Malvaceae
Malvella - Malvaceae
Maresia - Brassicaceae
Marrubium - Lamiaceae
Marsilea - Marsileaceae
Matricaria - Asteraceae
Matthiola - Brassicaceae
Medicago - Fabaceae

Melampyrum - Scrophulariaceae

Melica - Poaceae Melilotus - Fabaceae Melissa - Lamiaceae Melittis - Lamiaceae Mentha - Lamiaceae

Menyanthes - Menyanthaceae Mercurialis - Euphorbiaceae

Merendera - Liliaceae Mespilus - Rosaceae Meum - Apiaceae Mibora - Poaceae Micromeria - Lamiaceae Micropyrum - Poaceae Middendorfia - Lythraceae

Milium - Poaceae

Mimulus - Scrophulariaceae Minuartia - Caryophyllaceae Misopates - Scrophulariaceae

Modiola - Malvaceae

Moehringia - Caryophyllaceae Moenchia - Caryophyllaceae Molineriella - Poaceae

Molinia - Poaceae
Mollugo - Molluginaceae
Moneses - Pyrolaceae
Monotropa - Monotropaceae
Montia - Portulacaceae
Morina - Morinaceae
Morus - Moraceae
Muscari - Liliaceae
Myagrum - Brassicaceae
Mycelis - Asteraceae
Myosotis - Boraginaceae
Myosoton - Caryophyllaceae
Myosurus - Ranunculaceae

Myricaria - *Tamaricaceae* Myriophyllum - *Haloragaceae* Myrrhoides - *Apiaceae*

Najas - *Najadaceae*

 ${\bf Narcissus} \ - \ {\it Amaryllidace} \ ae$

Nardus - Poaceae

Nasturtium - Brassicaceae Neatostema - Boraginaceae Nectaroscordum - Liliaceae
Neottia - Orchidaceae
Nepeta - Lamiaceae
Neslia - Brassicaceae
Nicandra - Solanaceae
Nigella - Ranunculaceae
Nigritella - Orchidaceae
Nonea - Boraginaceae
Nuphar - Nymphaeaceae
Nymphaea - Nymphaeaceae
Nymphoides - Menyanthaceae
Odontites - Scrophulariaceae

Oenanthe - Apiaceae Oenothera - Onagraceae Omalotheca - Asteraceae Onobrychis - Fabaceae Ononis - Fabaceae Onopordum - Asteraceae Onosma - Boraginaceae

Ophioglossum - Ophioglossaceae

Ophrys - Orchidaceae
Opopanax - Apiaceae
Opuntia - Cactaceae
Orchis - Orchidaceae
Origanum - Lamiaceae
Orlaya - Apiaceae
Ornithogalum - Liliaceae
Ornithopus - Fabaceae
Orobanche - Orobanchaceae

Orthilia - *Pyrolaceae* Osmunda - *Osmundaceae*

Ostrya - Betulaceae
Osyris - Santalaceae
Otanthus - Asteraceae
Oxalis - Oxalidaceae
Oxyria - Polygonaceae
Oxytropis - Fabaceae
Paeonia - Paeoniaceae
Paliurus - Rhamnaceae
Pallenis - Asteraceae

Pancratium - Amaryllidaceae

Panicum - Poaceae Papaver - Papaveraceae Parapholis - Poaceae

Parentucellia - Scrophulariaceae

Parietaria - *Urticaceae* Paris - *Liliaceae*

Parnassia - Saxifragaceae Paronychia - Caryophyllaceae Parthenocissus - Vitaceae Parvotrisetum - Poaceae Paspalum - Poaceae Pastinaca - Apiaceae

Pedicularis - Scrophulariaceae Peganum - Zygophyllaceae Pennisetum - Poaceae Peplis - Lythraceae Peridictyon - Poaceae Periploca - Asclepiadaceae Persicaria - *Polygonaceae* Petasites - *Asteraceae*

Petrorhagia - Caryophyllaceae Petrosimonia - Chenopodiaceae

Peucedanum - Apiaceae Phacelia - Hydrophyllaceae Phacelurus - Poaceae

Phalaris - Poaceae
Phalaris - Poaceae
Phillyrea - Oleaceae
Phleum - Poaceae
Phlomis - Lamiaceae
Pholiurus - Poaceae
Phragmites - Poaceae
Phyllitis - Aspleniaceae
Physalis - Solanaceae
Physospermum - Apiaceae

Phyteuma - Campanulaceae Phytolacca - Phytolaccaceae Picea - Pinaceae Picnomon - Asteraceae Picris - Asteraceae

Pimpinella - *Apiaceae* Pinguicula - *Lentibulariaceae*

Pinguicula - Lentibulariac Pinus - Pinaceae Piptatherum - Poaceae Pirinia - Caryophyllaceae Pistacia - Anacardiaceae

Pisum - Fabaceae

Plantago - *Plantaginaceae* Platanthera - *Orchidaceae* Platanus - *Platanaceae*

 ${\bf Pleuropteropyrum} \ - \ Polygonaceae$

Pleurospermum - *Apiaceae* Plumbago - *Plumbaginaceae*

Poa - Poaceae

Polycarpon - Caryophyllaceae Polycnemum - Chenopodiaceae

Polygala - Polygalaceae Polygonatum - Liliaceae Polygonum - Polygonaceae Polypodium - Polypodiaceae

Polypogon - *Poaceae* Polystichum - *Aspidiaceae* Populus - *Salicaceae* Portulaca - *Portulacaceae*

Potamogeton - Potamogetonaceae

Potentilla - Rosaceae Prangos - Apiaceae Prenanthes - Asteraceae Primula - Primulaceae Pritzelago - Brassicaceae Prunella - Lamiaceae Prunus - Rosaceae

Pseudorchis - *Orchidaceae* Pseudotsuga - *Pinaceae* Psilurus - *Poaceae*

Pteridium - *Hypolepidaceae* Pterocephalus - *Dipsacaceae* Ptilostemon - *Asteraceae* Puccinellia - Poaceae Pulicaria - Asteraceae Pulmonaria - Boraginaceae Pulsatilla - Ranunculaceae Pycreus - Cyperaceae Pyracantha - Rosaceae Pyrola - Pyrolaceae Pyrus - Rosaceae Quercus - Fagaceae Queria - Caryophyllaceae

Radiola - Linaceae Ramonda - Gesneriaceae Ranunculus - Ranunculaceae Raphanus - Brassicaceae Rapistrum - Brassicaceae Reichardia - Asteraceae Reseda - Resedaceae Rhagadiolus - Asteraceae Rhamnus - Rhamnaceae Rheum - Polygonaceae

Rhinanthus - Scrophulariaceae

Rhodax - Cistaceae Rhodiola - Crassulaceae Rhododendron - Ericaceae Rhus - Anacardiaceae

Rhynchocorys - Scrophulariaceae

Ribes - Saxifragaceae Rindera - Boraginaceae Robinia - Fabaceae Rochelia - Boraginaceae Roemeria - Papaveraceae Romulea - Iridaceae Rorippa - Brassicaceae

Rosa - Rosaceae Rubia - Rubiaceae Rubus - Rosaceae Rumex - Polygonaceae Ruppia - Ruppiaceae Ruscus - Liliaceae Ruta - Rutaceae

Sagina - Caryophyllaceae Sagittaria - Alismataceae Salicornia - Chenopodiaceae

Salix - Salicaceae

Salsola - Chenopodiaceae Salvia - Lamiaceae Salvinia - Salviniaceae Sambucus - Caprifoliaceae Samolus - Primulaceae Sanguisorba - Rosaceae Sanicula - Apiaceae

Saponaria - Caryophyllaceae

Satureja - Lamiaceae Saussurea - Asteraceae Saxifraga - Saxifragaceae Scabiosa - Dipsacaceae Scandix - Apiaceae

Schivereckia - Brassicaceae Schoenoplectus - Cyperaceae Schoenus - Cyperaceae

Scilla - Liliaceae Scirpus - Cyperaceae

Scleranthus - Caryophyllaceae

Sclerochloa - Poaceae Scolymus - Asteraceae Scorpiurus - Fabaceae Scorzonera - Asteraceae

Scrophularia - Scrophulariaceae

Scutellaria - Lamiaceae Secale - Poaceae Securigera - Fabaceae Sedum - Crassulaceae Selaginella - Selaginellaceae

Selinum - Apiaceae

Sempervivum - Crassulaceae

Senecio - Asteraceae Serapias - Orchidaceae Serratula - Asteraceae Seseli - Apiaceae Sesleria - Poaceae Setaria - Poaceae Sherardia - Rubiaceae Sibbaldia - Rosaceae Sicyos - Cucurbitaceae Sideritis - Lamiaceae Sieglingia - Poaceae Silaum - Apiaceae Silene - Caryophyllaceae

Silphium - Asteraceae Silybum - Asteraceae Sinapis - *Brassicaceae* Sison - *Apiaceae*

Sisymbrium - Brassicaceae Sisyrinchium - Iridaceae

Sium - Apiaceae Smilax - Smilacaceae Smyrnium - Apiaceae Solanum - Solanaceae Soldanella - Primulaceae Solidago - Asteraceae Sonchus - Asteraceae Sorbus - Rosaceae Sorghum - Poaceae

Sparganium - Sparganiaceae

Spartium - Fabaceae Spergula - Caryophyllaceae Spergularia - Caryophyllaceae

Spiraea - Rosaceae Spiranthes - Orchidaceae Spirodela - Lemnaceae Sporobolus - Poaceae Stachys - Lamiaceae Staphylea - Staphyleaceae Stefanoffia - Apiaceae Stellaria - Caryophyllaceae Steptorhamphus - Asteraceae Sternbergia - Amaryllidaceae

Stipa - Poaceae

Stratiotes - Hydrocharitaceae Streptopus - Liliaceae Suaeda - Chenopodiaceae Subularia - Brassicaceae

Succisa - *Dipsacaceae* Swertia - *Gentianaceae*

Symphyandra - Campanulaceae

Symphytum - Boraginaceae

Syringa - Oleaceae
Taeniatherum - Poaceae
Tamarix - Tamaricaceae
Tamus - Dioscoreaceae
Tanacetum - Asteraceae
Taraxacum - Asteraceae

Taxus - Taxaceae

Teesdalia - *Brassicaceae* Telekia - *Asteraceae*

Tetragonolobus - Fabaceae

Teucrium - Lamiaceae

Thalictrum - Ranunculaceae Theligonum - Theligonaceae Thelypteris - Thelypteridaceae

Thesium - Santalaceae Thlaspi - Brassicaceae

Thymelaea - Thymeleaceae Thymus - Lamiaceae Tilia - Tiliaceae Tolpis - Asteraceae

Tordylium - *Apiaceae* Torilis - *Apiaceae*

Tozzia - Scrophulariaceae Trachelium - Campanulaceae Trachomitum - Apocynaceae

Trachynia - Poaceae

Trachystemon - Boraginaceae Tragopogon - Asteraceae

Tragopogon - Astero Tragus - Poaceae

Trapa - Trapaceae

Traunsteinera - Orchidaceae Tremastelma - Dipsacaceae Tribulus - Zygophyllaceae Trichophorum - Cyperaceae

Trifolium - Fabaceae

Triglochin - Juncaginaceae

Trigonella - Fabaceae

Trinia - Apiaceae
Trisetum - Poaceae
Triticum - Poaceae
Trollius - Ranunculaceae
Tuberaria - Cistaceae
Tulipa - Liliaceae
Turgenia - Apiaceae
Turgeniopsis - Apiaceae
Tussilago - Asteraceae
Typha - Typhaceae
Tyrimnus - Asteraceae
Ulmus - Ulmaceae

Umbilicus - *Crassulaceae* Urospermum - *Asteraceae*

Urtica - Urticaceae

Utricularia - Lentibulariaceae Vaccaria - Caryophyllaceae Vaccinium - Ericaceae Valeriana - Valerianaceae Valerianella - Valerianaceae Vallisneria - Hydrocharitaceae Velezia - Caryophyllaceae

Ventenata - Poaceae Veratrum - Liliaceae

Verbascum - Scrophulariaceae

Verbena - Verbenaceae Veronica - Scrophulariaceae Viburnum - Caprifoliaceae

Vicia - Fabaceae Vinca - Apocynaceae

Vincetoxicum - Asclepiadaceae

Viola - Violaceae

Viscaria - Caryophyllaceae Viscum - Loranthaceae Vitex - Verbenaceae Vitis - Vitaceae Vulpia - Poaceae

Waldsteinia - Rosaceae Wolffia - Lemnaceae Xanthium - Asteraceae Xeranthemum - Asteraceae Zannichellia - Zannichelliaceae

Ziziphora - Lamiaceae Ziziphus - Rhamnaceae Zostera - Zosteraceae

 ${\bf Zygophyllum-} {\it Zygophyllaceae}$

СПИСЪК НА СЕМЕЙСТВАТА И ВКЛЮЧЕНИТЕ В ТЯХ РОДОВЕ LIST OF THE FAMILIES AND THEIR GENERA

Acanthaceae - Acanthus

Aceraceae - Acer

Adiantaceae - Adiantum

Adoxaceae - Adoxa

Alismataceae - Alisma, Caldesia, Sagittaria

Amaranthaceae - Amaranthus

Amaryllidaceae - Galanthus, Leucojum, Narcissus, Pancratium, Sternbergia

Anacardiaceae - Cotinus, Pistacia, Rhus

Apiaceae (Umbelliferae) - Aegopodium, Aethusa, Anethum, Angelica, Anthriscus, Apium, Astrantia, Astrodaucus, Berula, Bifora, Bunium, Bupleurum, Cachrys, Carum, Caucalis, Chaerophyllum, Cicuta, Cnidium, Conium, Coriandrum, Crithmum, Daucus, Echinophora, Eclipta, Eryngium, Falcaria, Ferula, Ferulago, Foeniculum, Heptaptera, Heracleum, Hippomarathrum, Huetia, Lagoecia, Laser, Laserpitium, Ligusticum, Malabayla, Meum, Myrrhoides, Oenanthe, Opopanax, Orlaya, Pastinaca, Peucedanum, Physospermum, Pimpinella, Pleurospermum, Prangos, Sanicula, Scandix, Selinum, Seseli, Silaum, Sison, Sium, Smyrnium, Stefanoffia, Tordylium, Torilis, Trinia, Turgenia, Turgeniopsis

Apocynaceae - Trachomitum, Vinca

Aquifoliaceae - Ilex

Araceae - Acorus, Arum, Dracunculus

Araliaceae - Hedera

Aristolochiaceae - Aristolochia, Asarum

Asclepiadaceae - Asclepias, Cionura, Cynanchum, Periploca, Vincetoxicum

Aspidiaceae - Dryopteris, Gymnocarpium, Polystichum

Aspleniaceae - Asplenium, Ceterach, Phyllitis

Asteraceae (Compositae) – Achillea, Adenostyles, Ambrosia, Antennaria, Anthemis, Arctium, Arnica, Artemisia, Aster, Asteriscus, Bellis, Bidens, Bombycilaena, Calendula, Carduus, Carlina, Carpesium, Carthamus, Centaurea, Cephalorrhynchus, Chondrilla, Cicerbita, Cichorium, Cirsium, Cnicus, Conyza, Crepis, Crupina, Dittrichia, Doronicum, Echinops, Erigeron, Eupatorium, Filaginella, Filago, Galinsoga, Gnaphalium, Hedypnois, Helianthus, Helichrysum, Hieracium, Homogyne, Hypochaeris, Inula, Iva, Jurinea, Lactuca, Lapsana, Leontodon, Leontopodium, Leucanthemella, Leucanthemum, Ligularia, Logfia, Matricaria, Mycelis, Omalotheca, Onopordum, Otanthus, Pallenis, Petasites, Picnomon, Picris, Prenanthes, Ptilostemon, Pulicaria, Reichardia, Rhagadiolus, Saussurea, Scolymus, Scorzonera, Senecio, Serratula, Silphium, Silybum, Solidago, Sonchus, Steptorhamphus, Tanacetum, Taraxacum, Telekia, Tolpis, Tragopogon, Tussilago, Tyrimnus, Urospermum, Xanthium, Xeranthemum

Athyriaceae - Athyrium, Cystopteris

Azollaceae - Azolla

Balsaminaceae - Impatiens

Berberidaceae - Berberis, Epimedium, Leontice, Mahonia

Betulaceae - Alnus, Betula, Carpinus, Corylus, Ostrya

Bignoniaceae - Catalpa

Blechnaceae - Blechnum

Boraginaceae - Alkanna, Anchusa, Argusia, Asperugo, Buglossoides, Cerinthe, Cynoglossum, Echium, Heliotropium, Lappula, Lithospermum, Lycopsis,

Myosotis, Neatostema, Nonea, Onosma, Pulmonaria, Rindera, Rochelia, Symphytum, Trachystemon

Brassicaceae (Cruciferae) - Aethionema, Alliaria, Alyssoides, Alyssum, Andrzeiowskia, Arabidopsis, Arabis, Armoracia, Aubrieta, Aurinia, Barbarea, Berteroa, Brassica, Bunias, Cakile, Calepina, Camelina, Capsella, Cardamine, Cardaminopsis, Cardaria, Chorispora, Clypeola, Conringia, Coronopus, Crambe, Descurainia, Diplotaxis, Draba, Erophila, Eruca, Erysimum, Euclidium, Fibigia, Hesperis, Hornungia, Hymenolobus, Iberis, Isatis, Kernera, Lepidium, Lepidotrichum, Lunaria, Malcolmia, Maresia, Matthiola, Myagrum, Nasturtium, Neslia, Pritzelago, Raphanus, Rapistrum, Rorippa, Schivereckia, Sinapis, Sisymbrium, Subularia, Teesdalia, Thlaspi

Butomaceae - Butomus

Cactaceae - Opuntia

Callitrichaceae - Callitriche

Campanulaceae - Asyneuma, Campanula, Edraianthus, Jasione, Legousia, Phyteuma, Symphyandra, Trachelium

Cannabaceae – Canabis, Humulus

Capparidaceae - Cleome

Caprifoliaceae - Lonicera, Sambucus, Viburnum

Caryophyllaceae - Agrostemma, Arenaria, Bufonia, Cerastium, Corrigiola, Cucubalus, Dianthus, Gypsophila, Herniaria, Holosteum, Lychnis, Minuartia, Moehringia, Moenchia, Myosoton, Paronychia, Petrorhagia, Pirinia, Polycarpon, Queria, Sagina, Saponaria, Scleranthus, Silene, Spergula, Spergularia, Stellaria, Vaccaria, Velezia, Viscaria

Celastraceae - Evonymus

Ceratophyllaceae - Ceratophyllum

Chenopodiaceae - Atriplex, Bassia, Beta, Camphorosma, Ceratocarpus, Chenopodium, Corispermum, Halimione, Kochia, Petrosimonia, Polycnemum, Salicornia, Salsola, Suaeda

Cistaceae - Cistus, Fumana, Helianthemum, Rhodax, Tuberaria

Commelinaceae - Commelina

Convolvulaceae - Calystegia, Convolvulus, Cressa

Cornaceae - Cornus

Crassulaceae - Crassula, Jovibarba, Rhodiola, Sedum, Sempervivum, Umbilicus

Cryptogrammaceae - Cryptogramma

Cucurbitaceae - Bryonia, Citrullus, Ecballium, Echinocystis, Sicyos

Cupressaceae - Juniperus

Cuscutaceae - Cuscuta

Cyperaceae - Acorellus, Blysmus, Bolboschoenus, Carex, Cladium, Cyperus, Dichostylis, Eleocharis, Eriophorum, Fimbristylis, Galilea, Holoschoenus, Isolepis, Kobresia, Pycreus, Schoenoplectus, Schoenus, Scirpus, Trichophorum

Dioscoreaceae - Tamus

Dipsacaceae - Cephalaria, Dipsacus, Knautia, Pterocephalus, Scabiosa, Succisa, Tremastelma

Droseraceae - Aldrovanda, Drosera

Elaeagnaceae – Elaeagnus, Hippophae

Elatinaceae - Elatine

Empetraceae - Empetrum

Ephedraceae - Ephedra

Equisetaceae - Equisetum

Ericaceae - Arbutus, Arctostaphylos, Bruckenthalia, Calluna, Erica, Rhododendron, Vaccinium

Euphorbiaceae - Acalypha, Andrachne, Chrozophora, Euphorbia, Mercurialis

Fabaceae (Papilionaceae) – Amorpha, Anthyllis, Astracantha, Astragalus, Biserrula, Bituminaria, Caragana, Cercis, Chamaecytisus, Chamaespartium, Cicer, Colutea, Coronilla, Corothamnus, Dorycnium, Galega, Genista, Gleditsia, Glycyrrhiza, Hedysarum, Hippocrepis, Hymenocarpus, Lathyrus, Lembotropis, Lens, Lotononis, Lotus, Lupinus, Medicago, Melilotus, Onobrychis, Ononis, Ornithopus, Oxytropis, Pisum, Robinia, Scorpiurus, Securigera, Spartium, Tetragonolobus, Trifolium, Trigonella, Vicia

Fagaceae - Castanea, Fagus, Quercus

Frankeniaceae - Frankenia

Gentianaceae - Blackstonia, Centaurium, Gentiana, Gentianella, Swertia

Geraniaceae - Erodium, Geranium

Gesneriaceae - Haberlea, Ramonda

Globulariaceae - Globularia

Haloragaceae - Myriophyllum

Hippocastanaceae - Aesculus

Hippuridaceae - Hippuris

Hydrocharitaceae - Elodea, Hydrocharis, Stratiotes, Vallisneria

Hydrophyllaceae - Phacelia

Hypericaceae (Guttiferae) - Hypericum

Hypolepidaceae - Pteridium

Iridaceae - Crocus, Gladiolus, Iris, Romulea, Sisyrinchium

Isoetaceae - Isoetes

Juglandaceae - Juglans

Juncaceae - Juncus, Luzula

Juncaginaceae - Triglochin

Lamiaceae (Labiatae) - Acinos, Ajuga, Ballota, Betonica, Calamintha, Clinopodium,
Dracocephalum, Galeopsis, Glechoma, Hyssopus, Lamium, Lavandula,
Leonurus, Lycopus, Marrubium, Melissa, Melittis, Mentha, Micromeria, Nepeta,
Origanum, Phlomis, Prunella, Salvia, Satureja, Scutellaria, Sideritis, Stachys,
Teucrium, Thymus, Ziziphora

Lemnaceae - Lemna, Spirodela, Wolffia

Lentibulariaceae - Pinguicula, Utricularia

Liliaceae – Allium, Anthericum, Asparagus, Asphodeline, Asphodelus, Bellevalia, Colchicum, Convallaria, Erythronium, Fritillaria, Gagea, Hyacinthella, Lilium, Lloydia, Merendera, Muscari, Nectaroscordum, Ornithogalum, Paris, Polygonatum, Ruscus, Scilla, Streptopus, Tulipa, Veratrum

Linaceae - Linum, Radiola

Loranthaceae - Arceutobium, Loranthus, Viscum

Lycopodiaceae - Diphasiastrum, Huperzia, Lycopodiella, Lycopodium

Lythraceae - Ammannia, Lythrum, Middendorfia, Peplis

Malvaceae - Abutilon, Alcea, Althaea, Hibiscus, Lavatera, Malva, Malvella, Modiola

Marsileaceae - Marsilea

Menyanthaceae - Menyanthes, Nymphoides

Molluginaceae - Glinus, Mollugo

Monotropaceae - Monotropa

Moraceae – Broussonetia, Ficus, Morus

Morinaceae - Morina

Najadaceae - Najas

Nymphaeaceae - Nuphar, Nymphaea

Oleaceae - Fraxinus, Jasminum, Ligustrum, Phillyrea, Syringa

Onagraceae - Circaea, Epilobium, Ludwigia, Oenothera

Ophioglossaceae - Botrychium, Ophioglossum

Orchidaceae - Anacamptis, Cephalanthera, Coeloglossum, Corallorhiza, Cypripedium, Dactylorhiza, Epipactis, Epipogium, Goodyera, Gymnadenia, Hammarbya, Herminium, Himantoglossum, Limodorum, Liparis, Listera, Neottia, Nigritella, Ophrys, Orchis, Platanthera, Pseudorchis, Serapias, Spiranthes, Traunsteinera

Orobanchaceae - Orobanche

Osmundaceae - Osmunda

Oxalidaceae - Oxalis

Paeoniaceae - Paeonia

Papaveraceae - Chelidonium, Corydalis, Fumaria, Glaucium, Hypecoum, Papaver, Roemeria

Phytolaccaceae - Phytolacca

Pinaceae - Abies, Picea, Pinus, Pseudotsuga

Plantaginaceae - Plantago

Platanaceae - Platanus

Plumbaginaceae - Armeria, Goniolimon, Limonium, Plumbago

Poaceae (Gramineae) - Achnatherum, Aegilops, Aeluropus, Agropyron, Agrostis, Aira, Alopecurus, Ammophila, Anthoxanthum, Apera, Arrhenatherum, Avena, Avenula, Beckmannia, Bellardiochloa, Brachiaria, Brachypodium, Briza, Bromus, Calamagrostis, Catabrosa, Cenchrus, Chrysopogon, Cleistogenes, Corynephorus, Crypsis, Cynodon, Cynosurus, Dactylis, Danthonia, Danthoniastrum, Dasypyrum, Deschampsia, Desmazeria, Dichanthium, Digitaria, Echinaria, Echinochloa, Eleusine, Elymus, Eragrostis, Erianthus, Festuca, Festulolium, Gastridium, Gaudinia, Glyceria, Hainardia, Hierochloe, Holcus, Hordelymus, Hordeum, Imperata, Koeleria, Lagurus, Leersia, Lerchenfeldia, Leymus, Lolium, Lophochloa, Melica, Mibora, Micropyrum, Milium, Molineriella, Molinia, Nardus, Panicum, Parapholis, Parvotrisetum, Paspalum, Pennisetum, Peridictyon, Phacelurus, Phalaris, Phleum, Pholiurus, Phragmites, Piptatherum, Poa, Polypogon, Psilurus, Puccinellia, Sclerochloa, Secale, Sesleria, Setaria, Sieglingia, Sorghum, Sporobolus, Stipa, Taeniatherum, Trachynia, Tragus, Trisetum, Triticum, Ventenata, Vulpia

Polygalaceae - Polygala

Polygonaceae - Bilderdykia, Bistorta, Fallopia, Oxyria, Persicaria, Pleuropteropyrum, Polygonum, Rheum, Rumex

Polypodiaceae - Polypodium

Pontederiaceae - Heteranthera

Portulacaceae - Montia, Portulaca

Potamogetonaceae - Groenlandia, Potamogeton

Primulaceae - Anagalis, Androsace, Asterolinon, Cortusa, Cyclamen, Hottonia, Lysimachia, Primula, Samolus, Soldanella

Pyrolaceae - Moneses, Orthilia, Pyrola

Rafflesiaceae - Cytinus

Ranunculaceae - Aconitum, Actaea, Adonis, Anemone, Aquilegia, Caltha, Ceratocephalus, Clematis, Consolida, Delphinium, Eranthis, Helleborus, Hepatica, Isopyrum, Myosurus, Nigella, Pulsatilla, Ranunculus, Thalictrum, Trollius

Resedaceae - Reseda

Rhamnaceae - Frangula, Paliurus, Rhamnus, Ziziphus

Rosaceae - Agrimonia, Alchemilla, Amelanchier, Amygdalus, Aphanes, Aremonia, Cotoneaster, Crataegus, Dryas, Duchesnea, Eriolobus, Filipendula, Fragaria, Geum, Laurocerasus, Malus, Mespilus, Potentilla, Prunus, Pyracantha, Pyrus, Rosa, Rubus, Sanguisorba, Sibbaldia, Sorbus, Spiraea, Waldsteinia

Rubiaceae - Asperula, Crucianella, Cruciata, Galium, Rubia, Sherardia

Ruppiaceae - Ruppia

Rutaceae - Dictamnus, Haplophyllum, Ruta

Salicaceae - Populus, Salix

Salviniaceae - Salvinia

Santalaceae - Comandra, Osyris, Thesium

Sapindaceae - Koelreuteria

Saxifragaceae - Chrysosplenium, Parnassia, Ribes, Saxifraga

Scrophulariaceae – Antirrhinum, Bartsia, Bellardia, Chaenorhinum, Cymbalaria,
Digitalis, Euphrasia, Gratiola, Kickxia, Lathraea, Limosella, Linaria, Lindernia,
Melampyrum, Mimulus, Misopates, Odontites, Parentucellia, Pedicularis,
Rhinanthus, Rhynchocorys, Scrophularia, Tozzia, Verbascum, Veronica

Selaginellaceae - Selaginella

Simaroubaceae - Ailanthus

Sinopteridaceae - Cheilanthes

Smilacaceae - Smilax

Solanaceae - Atropa, Datura, Hyoscyamus, Lycium, Nicandra, Physalis, Solanum

Sparganiaceae - Sparganium

Staphyleaceae - Staphylea

Tamaricaceae - Myricaria, Tamarix

Taxaceae - Taxus

Theligonaceae - Theligonum

Thelypteridaceae - Thelypteris

Thymeleaceae - Daphne, Thymelaea

Tiliaceae - Tilia

Trapaceae - Trapa

Typhaceae - Typha

Ulmaceae - Celtis, Ulmus

Urticaceae - Parietaria, Urtica

Valerianaceae - Centranthus, Valeriana, Valerianella

Verbenaceae – Verbena, Vitex

Violaceae - Viola

Vitaceae - Parthenocissus, Vitis

Zannichelliaceae - Zannichelia

Zosteraceae - Zostera

Zygophyllaceae – Peganum, Tribulus, Zygophyllum

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КОНСПЕКТ НА ВИСШАТА ФЛОРА НА БЪЛГАРИЯ

Хорология и флорни елементи

(Четвърто допълнено и преработено издание)

Съставители: Борис Асьов Антоанета Петрова Димитър Димитров Росен Василев

Под общата редакция на: Борис Асьов Антоанета Петрова

Оформление на корицата: Красимир Апостолов

Конспектът на висшата флора на България – четвърто допълнено и преработено издание – съдържа информация за 4102 вида растения, с карти за разпространението им в България по флорни райони, вертикални граници на разпространение, флорни елементи и статус на защита според Закона за биологичното разнообразие.

Конспектът е издание на Българска фондация "Биоразнообразие" (БФБ) – неправителствена организация, чиято мисия е да допринася за опазването на биологичното разнообразие и природното наследство на България. Фондацията подпомага организациите, ангажирани с биоразнообразието, стимулира участието на местните общности в управлението на природните ресурси и защитените територии, и допринася за обществената ангажираност към проблемите на природозащитата.

The Conspectus of the vascular flora of Bulgaria – fourth revised and enlarged edition – contains information about 4102 species of plants, with distribution maps according to the floristic regions, vertical range of distribution, floristic elements and protection status according to the Biodiversity Act.

The Conspectus is published by the Bulgarian Biodiversity Foundation – a non-governmental organisation, which mission is to support the conservation of the biodiversity and the natural heritage of Bulgaria. The Foundation supports the nature conservation organisations, the involvement of the local communities in the management of natural resources and protected territories, and contributes to the public awareness concerning the nature conservation.

БЪЛГАРСКА ФОНДАЦИЯ БИОРАЗНООБРАЗИЕ
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